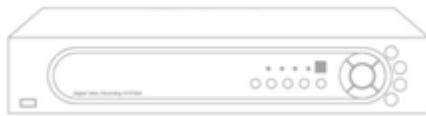


Veilux *Standalone* *User's Manual*

*Real Time
Recording
MPEG-4 DVR
•PREMIUM DVR
•STANDARD DVR
•Economy DVR*



*Professional
Digital Video Recorder*

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**CHAPTER 1**

NOTICE

◆ NOTICE BEFORE INSTALLATION

This manual serves basic operation on installation, and operation of DVR (Digital Video Recorder).

User who first operates DVR, or is not accustomed to use is strongly recommended to contact manufacturer, or supplier while installation, and to use in order to receive the technical service.

All users have to operate DVR after having read this manual sufficiently even though they are very skilled at this unit. Please keep notice at this manual to protect your safety from danger, or property. Please keep this manual on such a place where can easily be reached after having read it all.

◆ NOTICE FOR SAFETY

Please make sure of usage after bearing the following contents in mind to shorten the safety, and product failure before its operation.

◆ DO NOT SHOCK IN MOVE, AND INSTALLATION.

- Please check rating voltage (standard:DC12V5A, high-end:12V8A) before power on.
- Please check power off before installation.
- Avoid any place with moisture because of electric shock, and fire.
- Avoid any place with moisture, dust, or soot.
- Avoid any place with direct sunlight, or heating appliances.
- Avoid high, or low temperature.
- Procure sufficient air ventilation for the connection of system wiring.
- Don't install near to electronic devices such as radio, or TV.
- Install in sufficient air ventilation, and no vibration.
- Please take care of not putting the electric product into the cooling fan.
- Don't use water, or cleanser in surface cleaning to prevent an electric shock .
- Please clean system by dry towel in external cleaning.
- Do not pull power cord forcefully.
- Do not place any heavy objects on the main system.
- Do not open, or disassemble DVR without an assistance of qualified service personnel.
- Please power off in case of moving DVR.
- Please equip with the safety facility to diminish the loss for electricity failure, and lighting.
- Do not connect signal cable of camera with DVR system during camera installation.
- Please power off immediately, contact manufacturer, or supplier if you catch strange scent, or smog.



This equipment had been tested and found to comply with the limits for CLASS A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

FCC Compliance Statement

Caution : Any change, or modification in construction of this device which are not expressly approved the party responsible for compliance could avoid the user's authority to operate the equipment .

NOTE : This equipment has been tested, and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, can radiate radio frequency energy, and , if not installed, and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to convert the interference at his own expense.



OVERVIEW

2.1 FEATURES

1. SURVEILLANCE

- ▶ Real time moving picture (Max. MPEG-4 480 Frame (Basic 16CH)) .
- ▶ Multi screen display (Basic on 16CH): Single / 4 / 6 / 9 / 13 / 16 .
- ▶ PIP (Picture In Picture) .
- ▶ Auto sequence.
- ▶ Multi output monitor (Output monitor 1, Spot 1, S-Video 1, VGA 1).
- ▶ PTZ (Pan / Tilt / Zoom).
- ▶ Digital Zoom (X2)
- ▶ Mosaic function .
- ▶ Video loss sensor detection.
- ▶ External alarm, and recording event list for motion detection.
- ▶ Supported user friendly GUI interface, remote controller, and mouse.

2. RECORDING

- ▶ Recording in high quality of MPEG-4 real time motion picture
- ▶ Recording resolution setup adjustable to backup capacity (16CH Max. 480 frame)
- ▶ Multi recording for manual, event, and schedule.
- ▶ One time system for display, recording, playback, backup, and network.
- ▶ Easy setup for recording resolution, and motion detection part.
- ▶ Supported manual, and reserved recording function.
- ▶ Supported Individual channel recording.

3. PLAYBACK

- ▶ Playback by event, time, and channel.
- ▶ Mouse controlled search
- ▶ Playback for still image, and search for still display detection.
- ▶ Playback by event list (sensor, motion).
- ▶ Easy search with remote controller, and mouse.
- ▶ Digital zoom in playback display screen (Digital Zoom X2)

4. NETWORK

- ▶ Supported PPPoE, Static and DHCP.
- ▶ Supported itself, and general DDNS.
- ▶ TCP/IP.
- ▶ Unlimited multi access (Recommended 10).
- ▶ Supported multi mode (LIVE/PB/NETWORK BACKUP/FILE PLAY)
- ▶ Multi DVR Control
- ▶ Remote Control
- ▶ PTZ Control
- ▶ Save AVI
- ▶ Save & print still
- ▶ Auto update
- ▶ Web viewer
- ▶ File viewer
- ▶ Multi network viewer
- ▶ CMS network viewer

5. AUDIO

- ▶ One time recording for real time 4CH audio input.
- ▶ Input : 4CH(rear 4), Output : 1ch(rear).
- ▶ Audio channel selectable.

6. BACKUP

- ▶ Backup by network viewer.
- ▶ Supported multi backup function : CD±R,CD±RW,DVD±R,DVD±RW and USB.

7. OTHERS

- ▶ S-Video, Spot output.
- ▶ Alarm In/Out, RS-485, RS-232 Connections.
- ▶ Connection of loop-through.
- ▶ Supported multi language.
- ▶ One remote controller for Max. 4 DVRs.
- ▶ Easy operation with USB mouse.
- ▶ Easy firmware upgrade with USB, network and webhard.

2.2 PACKING DETAILS

DVR includes main unit, and its following accessories in the package packing. Please check all items if there is all packed inside as below. Please contact manufacturer, or supplier if found missing accessories.

DVR UNIT

Premium-series



Standard-series



Economy-series



Contents Premium Standard Economy



Program CD



Remote controller



Quick guide



User manual



Batteries



Power code



Adaptor

○ (12V8A)

○ (12V5A)

○ (12V5A)



HDD screw



Rack mount



X (OPTION)



Sata HDD data cable

3

2

1

2.3 NAMES AND FUNCTION

2.3.1 FRONT PANEL

PREMIUM DVR



SECTION	NO	NAME	FUNCTION
BACKUP	1	DVD RW	Back up recording &playback video in DVD/CD
	2	USB 2.0	External connector (USB & MOUSE)
FUNCTION	3	INFO	Show information for DVR system, HDD and firmware
	4	DISPLAY	Change divided display in live&playback mode
SEARCH 1	5	PTZ	Control function of PTZ
	6	BACK UP	Go to backup mode
SEARCH 1	7	SEARCH	Go to search mode
	8	REW	Rewind (MAX.x32)
		PLAY/PAUSE	Play / Pause
		FAST	Fast forward
	9	STOP	Stop
RECORDING	10	REC	Recording or not
SYSTEM SETUP	11	Q.MENU	Go to Q.MENU mode
LED	11	POWER	Power ON/OFF
		REC	Recording
		ALARM	Sensor event
		NET	Network connection
REMOTE CONTROLLER	12	SENSOR	Remote controller receiving sensor
POWER	13	POWER	Safety power ON/OFF
SEARCH 2	14	JOG-SHUTTLE	Controller for playback direction speed and step playback
DIRECTION	15	ENTER	Operation

STANDARD DVR



SECTION	NO	NAME	FUNCTION
CHANNEL	1	CH 1-10	Channel selection in live, and play back display
BACKUP	2	USB 2.0	External connector of USB, and mouse
FUNCTION	3	DISPLAY	Change split display in live, and play back
	4	AUTO	Sequence operation, and stop
	5	PIP	Another display in one channel display.
	6	OSD	Icon, time table, and channel name in monitor display.
	7	INFO	System status, HDD status, and firmware information.
	8	BACK UP	Back up mode.
	9	PTZ	Use, or stop of PTZ function.
	LED SIGNAL	POWER	Electric status.
		REC	Recording feasibility
		ALARM	Event detection
		NET	Network connection
POWER SUPPLY	11	POWER	Stable stop of system operation
SYSTEM SETUP	12	Q.MENU	Q.MENU mode
PLAYBACK, RECORD AND ETC.	13	REC	Urgent recording
	14	REW	Reverse play back speed in play back mode
	14	PLAY/PAUSE	Play back start, or temporary pause
		FAST	Forward play back speed in playback mode
	15	STOP	Stop play back mode, and return to live display mode
	16	SENSOR	Remote controller sense
	16	SEARCH	Search mode
	17	□ □	Left & right direction key, and channel change
		▲ ▼	Up & down direction key, and channel change
		ENTER	In case of execution CHOICE, change into single display from live, and play back display
BACKUP	18	DVD RW	Backup for recorded, and stored video by DVD/CD

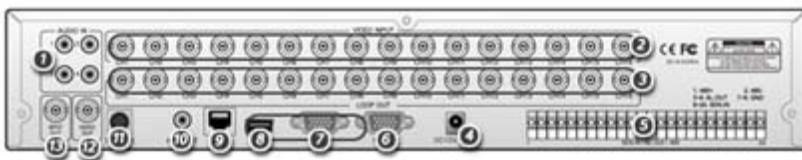
ECONOMY DVR



CLASSIFICATION	NO	NAME	FUNCTION
BACKUP	1	USB 2.0	External terminal(USB, Mouse)
SEARCH	2	SEARCH	Search mode
LED DISPLAY	3	REW	Reverse play back speed in play back mode
		PLAY/PAUSE	Play back start, or temporary pause
		FAST	Forward play back speed in play back mode
		STOP	Stop play back mode and return to live display mode
Q.MENU	4	Q.MENU	Q.MENU mode
MULTIPLE	5	DISPLAY	Multiple display mode
RECORDING	6	REC	Urgent recording
POWER	7	POWER	Stable stop of system operation
DIRECTION KEY	8	■□	Left/right, and up/down direction key. Channel change
REMOTE CONTROLLER	9	SENSOR	Remote controller sensor
LED DISPLAY	10	POWER	Electric status
		REC	Recording
		ALARM	Event detection
		NET	Network connection

2.3.2 REAR PANEL

PREMIUM & STANDARD DVR



16CH

NO	INPUT / OUTPUT CONNECTOR NAME	FUNCTION
1	AUDIO IN	Audio input & RCA input connector.
2	CH1~16	BNC input connector of camera
3	LOOP OUT	BNC(loop) output connector of camera
4	DC12V	Connect power code of adaptor socket
5	SEN.IN/AL/485	External sensor input relay output, PTZ camera connector
6	RS-232	RS-232 terminal
7	VGA	LCD monitor output connector
8	USB	External(USB, MOUSE) connector
9	LAN	Network (RJ-45) connector
10	AUDIO OUT	Audio output connector
11	S-VIDEO	S-VIDEO monitor connector
12	VIDEO OUT	Monitor output connector by BNC
13	SPOT OUT	Spot monitor output connector by BNC

PREMIUM & STANDARD DVR

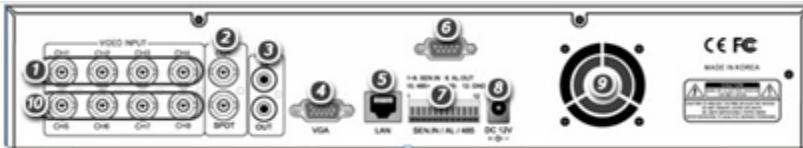


8CH

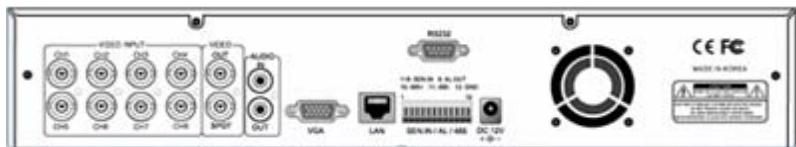


4CH

Economy -Series



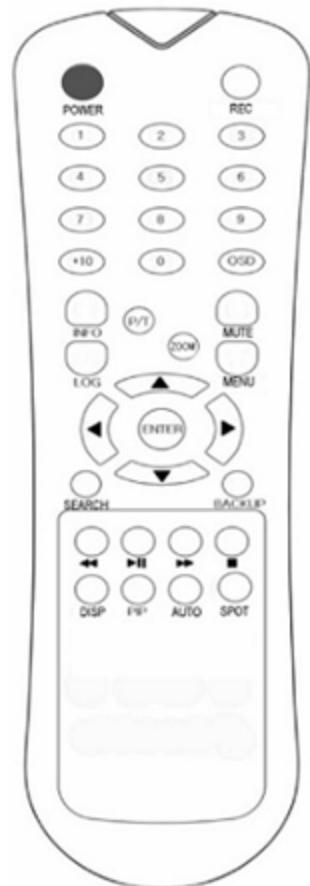
4CH



8CH

No	Input/output terminal	Function
1	CH 1~16	Camera BNC input terminal
2	VIDEO OUT	Monitor output & Spot monitor terminal
3	AUDIO IN,OUT	Audio input & output terminal
4	VGA	LCD monitor terminal
5	LAN	Network terminal (RJ45)
6	RS-232	RS232C terminal
7	SEN.IN/AL/485	External sensor, relay output, PTZ camera terminal
8	DC12V	Adaptor power code socket
9	FAN	Cooling fan
10	LOOP OUT	Camera Loop out terminal

2.3.3 REMOTE CONTROLLER



NO	NAME	FUNCTION
1	POWER	Power ON/OFF
2	REC	Recording
3	CHANNEL	Channel button
4	OSD	Osd ON/OFF
5	INFO	Information of DVR
6	P/T	PAN/TILT MODE
7	ZOOM	Zoom/Focus mode
8	MUTE	Audio ON/OFF
9	LOG	Show log listT
10	MENU	Q.MENU
11	▲	UP
12	▼	DOWN
13	□	LEFT
14	□	RIGHT
15	ENTER	MENU
16	SEARCH	Search recording list
17	BACK UP	Backup
18	◀	Reverse play
19	▶	Play and pause
20	▶▶	Fast forward
21	■	STOP
22	DISP	Display mode
23	PIP	PIP mode
24	AUTO	Auto sequence
25	SPOT	Spot monitor

2.3.4 Q-MENU



Group Conversion



System Setup



Display : Screen division
(1,4,6,9,13,16CH)



Auto : Auto sequence display



PIP : Pip mode



Digital zoom



Osd ON/OFF



Rec : Recording ON/OFF



Search recording



Backup (copy)



Info : System information



Ptz : Pan-tilt camera
control



Audio : Audio ON/OFF

2.4 SPECIFICATION

PREMIUM DVR

Model	SVR-1648	SVR-1824	SVR-412		
Video Signal	Video Input	16/8/4 Channel Input(BNC) NTSC / PAL, 1V 75 Ohm			
	Video Output	5 Outputs (Composite BNC, VGA, S-Video, Loop through, Spot)			
Compression	Enhanced MPEG-4, M-JPEG				
Pentaplex Operation	Real Time Watching / Recording / Playback / Networking / Back-Up Archiving				
Display	Resolution	NTSC – 704X480 / PAL – 704X576			
	Speed	Real Time Display			
	Mode	16, 13, 9, 6, 4, 1 screen PIP, Auto Screen			
Recording & Playback	Resolution	NTSC – 704X480, 704X240, 352X240, PAL – 704X576, 704X288, 352X288			
	REC & PB Speed	CIF 480ips/400ips HD1 240ips/200ips D1 120ips/100ips	CIF 240ips/200ips HD1 240ips/200ips D1 120ips/100ips		
	Mode	Continuous, Schedule, Event(Motion, Sensor)			
Search	Search by Calendar Search List, Event List, Time List				
Backup	Internal HDD	3			
	Internal DVD	1			
	External Backup	USB			
	Network Backup	TCP/IP(Backup Browser)			
Serial Interface	Pan/Tilt, Zoom, Preset	RS-485, RS-232			
Alarm Control	Sensor Input	16port	8port		
	Relay Out	4 port			
Audio	Audio Input	4 Channel Input			
	Audio Output	1 Channel Out			
Network	Interface	TCP/IP			
	Protocol	STATIC, DHCP, PPPoE			
	Browser	Functional Remote Client Software, Web Viewer(HTTP / IE), CMS			
System Control	Front Keypad(6X6) & Jog Shuttle, Remote Controller, Mouse				
Language	Multi OSD				

System Upgrade		USB / Network
	Signal Loss Detection	BEEP / BEEP+OSD / OSD / OFF
	Motion Detect Trace	YES / NO
	Motion Sensitivity	1~8
	Mosaic	ON/OFF
	Zoom	X2
	Dimension	430(W) X 92(H) X 380(D)mm
	Weight	8.0kg(without HDD)
	Power Supply	DC 12V 8A
	Approval	FCC, CE



STANDARD DVR

Model		SVR-1648S	SVR-1624S	SVR-824S	SVR-412S		
Video Signal	Video Input	16/8/4 Channel Input(BNC) NTSC / PAL, 1V 75 Ohm					
	Video Output	5 Outputs (Composite BNC, VGA, S-Video, Loop through, Spot)					
Compression		Enhanced MPEG-4, M-JPEG					
Pentaplex Operation		Real Time Watching / Recording / Playback / Networking / Back-Up Archiving					
Display	Resolution	NTSC – 704X480 / PAL – 704X576					
	Speed	Real Time Display					
	Mode	16, 13, 9, 6, 4, 1 screen PIP, Auto Screen					
Recording& Playback	Resolution	NTSC – 704X480, 704X240, 352X240 PAL – 704X576, 704X288, 352X288					
	REC & PB Speed	CIF 480ips/400ips HD1 240ips/200ips D1 120ips/100ips	CIF 240ips/200ips HD1 120ips/100ips D1 60ips/50ips	CIF 240ips/200ips HD1 120ips/100ips D1 60ips/50ips	CIF 120ips/100ips HD1 120ips/100ips D1 60ips/50ips		
	Mode	Continuous, Schedule, Event(Motion, Sensor)					
Search		Search by Calendar Search List, Event List, Time List					
Backup	Internal HDD	2					
	Internal DVD	1					
	External Backup	USB					
	Network Backup	TCP/IP(Backup Browser)					
Serial Interface	Pan/Tilt, Zoom, Preset	RS-485, RS-232					
Alarm Control	Sensor Input	16port	16port	8port	4port		
	Relay Out	4 port		1port			
Audio	Audio Input	4 Channel Input					
	Audio Output	1 Channel Out					
Network	Interface	TCP/IP					
	Protocol	STATIC, DHCP, PPPoE					
	Browser	Functional Remote Client Software, Web Viewer(HTTP / IE), CMS					

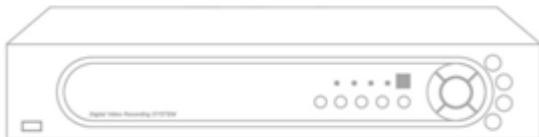
System Control	Front Keypad(6X6), Remote Controller, Mouse
Language	Multi OSD
System Upgrade	USB / Network
Signal Loss Detection	BEEP / BEEP+OSD / OSD / OFF
Motion Detect Trace	YES / NO
Motion Sensitivity	1~8
Mosaic	ON/OFF
Zoom	X2
Dimension	430(W) X 75(H) X 360(D)mm
Weight	7.50kg (without HDD)
Power Supply	DC 12V 5A
Approval	FCC, CE



COMPACT DVR

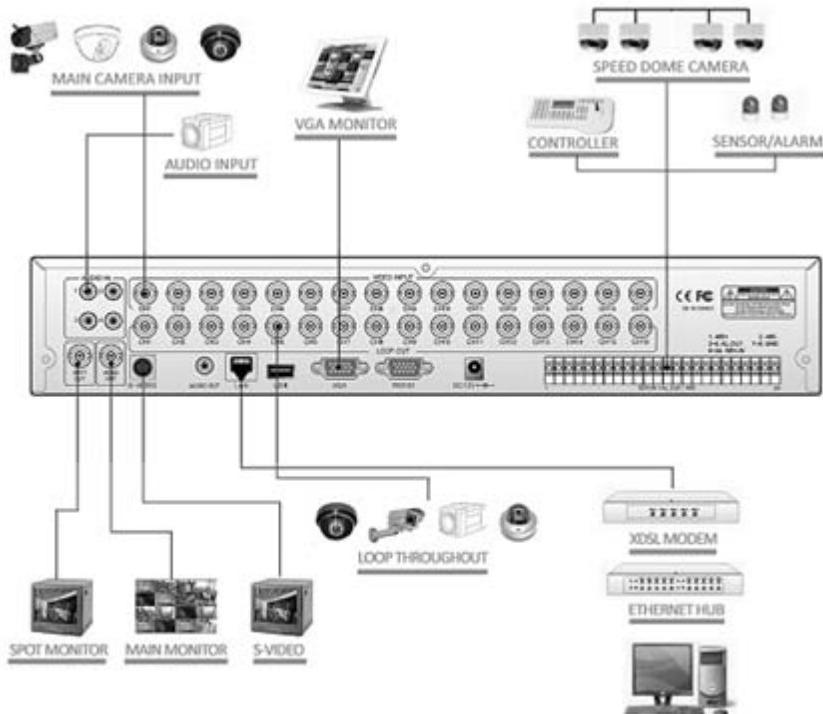
Model		SVR-824E	SVR-412E
Video Signal	Video Input	8/4 Channel Input(BNC) NTSC / PAL, 1V 75 Ohm	
Compression		Enhanced MPEG-4, M-JPEG	
Pentaplex Operation		Real Time Watching / Recording / Playback / Networking/ Back-Up Archiving	
Display	Resolution	NTSC – 704X480 / PAL – 704X576	
	Speed	Real Time Display	
	Mode	9, 6, 4, 1 screen PIP, Auto Screen	
Recording & Playback	Resolution	NTSC – 704X480, 704X240, 352X240 PAL – 704X576, 704X288, 352X288	
	REC & PB	CIF 240ips/200ips	HD1 120ips/100ips
	Speed	D1 120ips/100ips	D1 60ips/50ips
	Mode	Continuous, Schedule, Event(Motion, Sensor)	
Search		Search by Calendar Search List, Event List, Time List	
Backup	Internal HDD	1	
	External Backup	USB	
	Network Backup	TCP/IP(Backup Brower)	
Serial Interface	Pan/Tilt, Zoom, Preset	RS-485, RS-232	
Alarm Control	Sensor Input	8port	4port
	Alarm Out	1port	1port
Audio	Audio Input	1 Channel Input	
	Audio Output	1 Channel Out	
Network	Interface	TCP/IP	
	Protocol	STATIC, DHCP, PPPoE	
	Browser	Functional Remote Client Software, Web Viewer(HTTP / IE), CMS	
System Control		Front Keypad(6X6), Remote Controller, Mouse	
Language		Multi OSD	
System Upgrade		USB / Network	

	Signal Loss Detection	BEEP / BEEP+OSD / OSD / OFF
	Motion Detect Trace	YES / NO
	Motion Sensitivity	1~8
	Mosaic	ON/OFF
	Zoom	X2
	Dimension	17.0"x14.1"x3.0"(430x360x75mm)
	Weight	4.5kg(NET),5.0KG(GROSS)
	Power Supply	DC 12V 5A
	Approval	FCC, CE



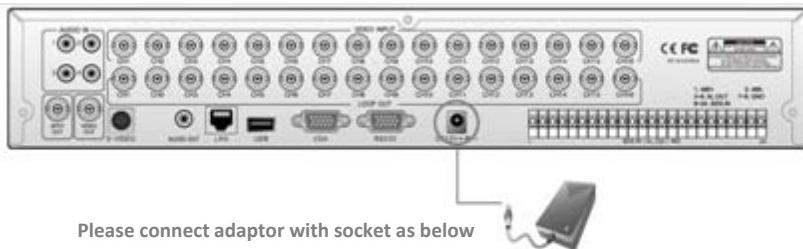
INSTALLATION

3.1 TOTAL CONNECTION DIAGRAM



3.2 INDIVIDUAL CONNECTION

3.2.1 POWER



- Automatic power on, and booting If power supply is on.

NOTE

1. Please connect a rate adaptor with DVR system.
2. Please use adaptor of above DC12V 8A for 3 HDD.
3. After pressing the power button on front panel, and checking message on monitor, please separate power socket from DVR system in case of power off.

3.2.2 RACK MOUNT INSTALLATION



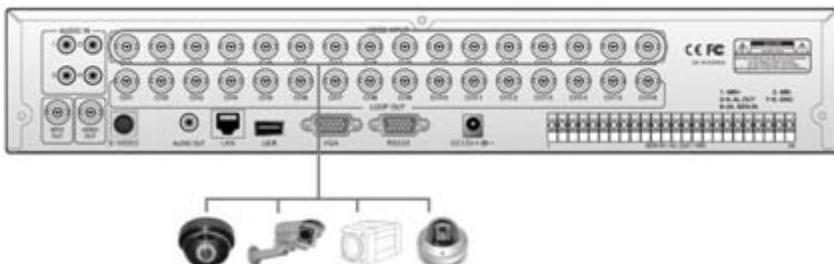
User can stick DVR into enclosed rack mount, and use it as below. This function supports Premium & Standard series.

3.2.2 VIDEO & AUDIO

■ VIDEO INPUT

Please connect DVR, and CCTV camera with CAMERA IN connector on rear panel by coaxial cable.

This DVR system can be connected with cameras of maximum NO. of 16/8/4.



NOTE

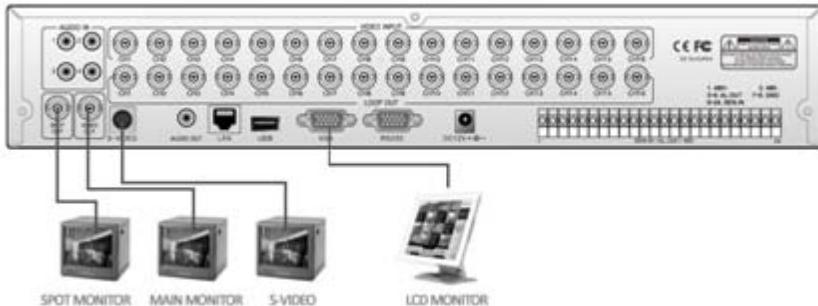
1. Video input type should be either NTSC or PAL, Don't use two types in mix.
2. Automatic setup for 75Ω resistance 75Ω terminal resistance is set up, automatically split into, and becomes Hi-Z status when connected with video output connector under input one.

CAUTION

1. Video vibration is possible when user connects BNC of camera with loop connector without connecting input connector. Be sure to link it to camera input connector.
2. Too much vibration is possible in case of not linking BNC connector to camera output without connecting camera cable.

■ VIDEO OUTPUT

Please connect DVR with monitor by video cable.



■ AUDIO INPUT

Please connect with jack MIC built-in camera in AUDIO IN connector, or external audio device at the back of this DVR.

[AUDIO INPUT CONNECTORS]

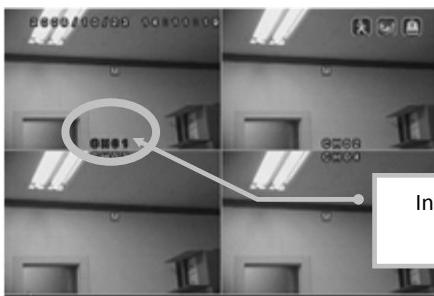


PREMIUM DVR COMPACT DVR
STANDARD DVR

[AUDIO OUTPUT CONNECTORS]



AUDIO OUT



In audio output, default channel color is in red color.

NOTE

Please select AUDIO IN channel on recording setup in case of setting up audio input.

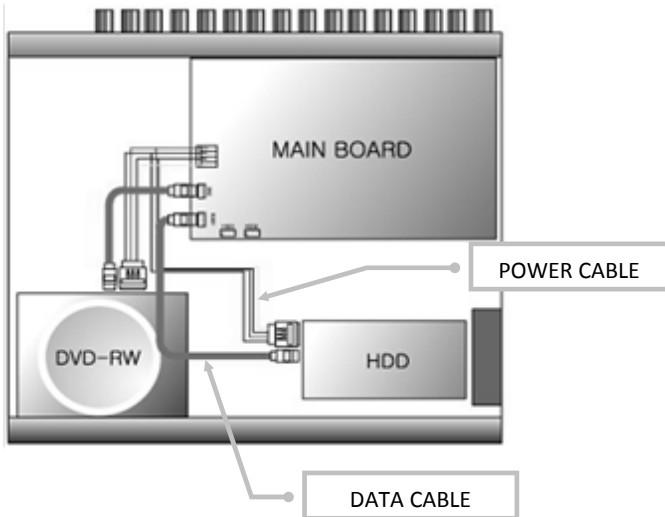
■ AUDIO OUTPUT

Please connect RCA of speaker built-in monitor in audio out connector at the back of this DVR.

NOTE

1. Four audio input synchronizes audio output for CH1~CH4 in single display.
2. Audio is possible to live, and play back display mode in playback.
3. Audio is not supported in double playback in single display mode.

3.2.3 HDD CONNECTION



- ▶ Please fix HDD to DVR unit by screws.
- ▶ Please connect main board with HDD power cable.
- ▶ Please assemble DVR, power on after connecting main board with HDD data cable.

Auto format starts after power on. If not, [System setup] 4. HDD format => "Yes"

NOTE

1. For HDD connection with DVR unit system, please be sure to power off.
2. For fixing screw to HDD bracket, please don't shock, which may cause HDD breakdown.
3. Please check problem after HDD installation.
4. For HDD problem, or not recognized, please contact manufacturer, or Supplier, and change it into new one. Recording is not properly worked.
5. All data disappear in HDD installation, which is not in the type of format.
6. The firmware upgrade is available only in the HDD connection.
7. When connecting HDD (or additional HDD) to DVR, please be sure to connect data cable to HDD port on main board. If being connected to DVD port, recording data may be damaged.

3.2.4 EXTERNAL CONNECTOR

■ SENSOR IN / RS-485

As external sensor terminal, input information is input from connected sensor, or DVR. Connector to output to the external alarm information of sensor motion, motion detection, and video loss.



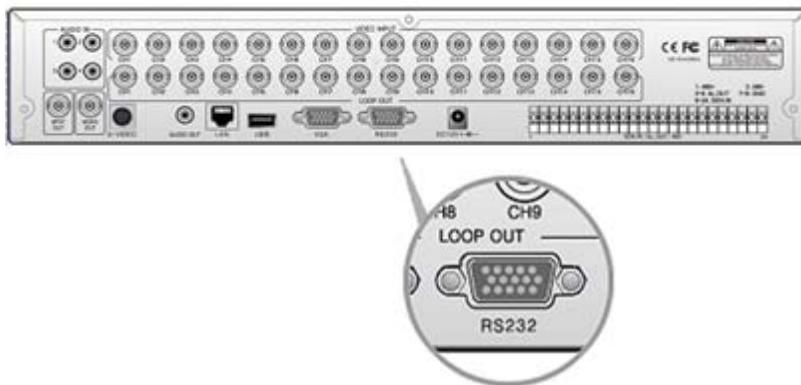
No	Description	No	Description
1	RS 485 +	13	SENSOR INPUT 5
2	RS 485 -	14	SENSOR INPUT 6
3	ALARM OUTPUT 1	15	SENSOR INPUT 7
4	ALARM OUTPUT 2	16	SENSOR INPUT 8
5	ALARM OUTPUT 3	17	SENSOR INPUT 9
6	ALARM OUTPUT 4	18	SENSOR INPUT 10
7	GROUND	19	SENSOR INPUT 11
8	GROUND	20	SENSOR INPUT 12
9	SENSOR INPUT 1	21	SENSOR INPUT 13
10	SENSOR INPUT 2	22	SENSOR INPUT 14
11	SENSOR INPUT 3	23	SENSOR INPUT 15
12	SENSOR INPUT 4	24	SENSOR INPUT 16

NOTE

User can set values in menu as he wants

■ RS-232

Connector through external controller.



No	Description
1	N/C
2	TX 232C
3	RX 232C
4	N/C
5	GND
6~9	N/C

NOTE

User can set values in menu as he wants

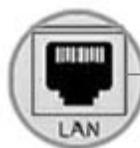
■ ETHERNET & USB



1) USB



2) ETHERNET



No	Description
1	VCC
2	USB DATA -
3	USB DATA +
4	GND

No	Description
1	N/C (Not Connected)
2	N/C (Not Connected)
3	RX- (Receive Data-)
4	N/C (Not Connected)
5	N/C (Not Connected)
6	RX+ (Receive Data+)
7	TX- (Transmit Data-)
8	TX+ (Transmit Data+)

OPERATION

4.1 PRE-OPERATION

Please make sure of power voltage before power on.

4.2 POWER CONNECTION

■ POWER ON

Please make sure of power voltage before power on.

1. Connect DVR to D/C power Jack by using adaptor in the package.
2. Having finished the connection between power cable and external device, power is on by pressing button on the rear panel. The following display appears.



3. Booting time takes about 30 seconds after power is on.
4. Video signal is automatically detected when power is on.
5. The menu values set by user is not changed in sudden power failure.

CAUTION

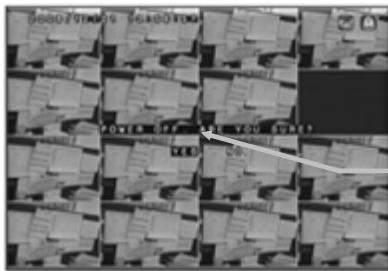
1. User is strongly recommended to use the adaptor in the package that manufacturer provides.
2. The DVR may be fatally damaged by use of different voltage of adaptor.

■ POWER OFF

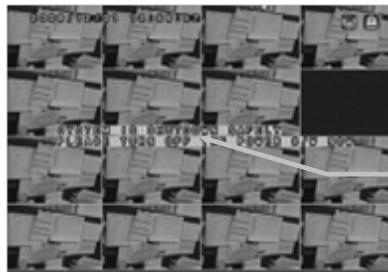
Press red POWER button on front panel.

Its function is mainly to prevent system damage due to suddenly unexpected power off.

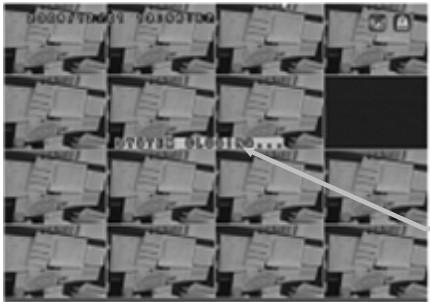
Pull off adaptor on rear panel when the message appears below.



Select YES to power off.



System is closing.
In this process, user can not return
to "power on" mode.



Pull off adaptor on rear panel
when this message appears.

CAUTION

"STOP RECORDING" message shows up on monitor when being pressed
during recording.

4.3 LIVE DISPLAY

4.3.1 SINGLE DISPLAY

When user selects one channel in multiple channel mode, this channel is switched over to single channel mode as below. User needs to press one more channel button after +10 button when he selects over channel 10. For example, he needs to press channel 1 Button after +10 Button when selecting channel 11. This channel selection method is the same as both live mode and playback mode.



[Full multiple channel]



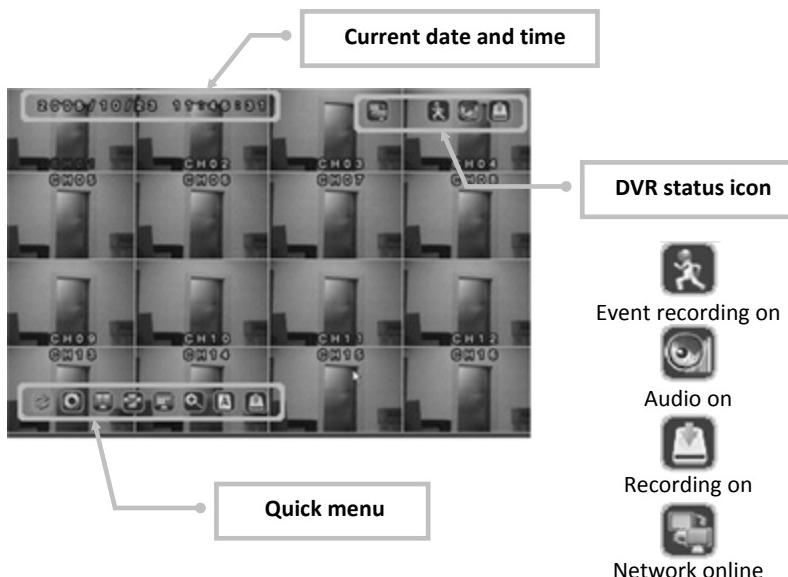
[Single channel]

NOTE

If pressing +10 button twice or any channel button is not followed for about 2 seconds after pressing +10 button, it goes to channel 10.

4.3.2 MULTIPLE DISPLAY

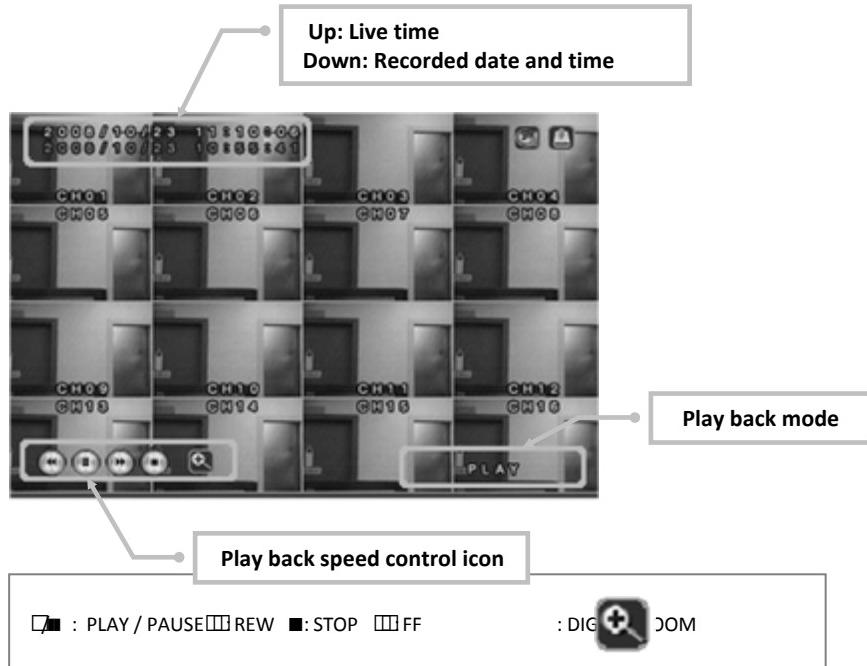
■ LIVE DISPLAY SCREEN



NOTE

For more details, please refer to Q.menu set up.

■ PLAYBACK DISPLAY MODE

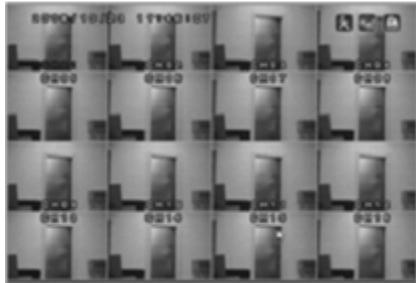


NOTE

User can play the recording data frame by frame by pressing REW or FF button in playback mode.

In 16 multiple channel, user can move to channel 1 by pressing digital zoom button.

Press DISPLAY button, and full divided channel mode is switched over to real-time surveillance display mode.



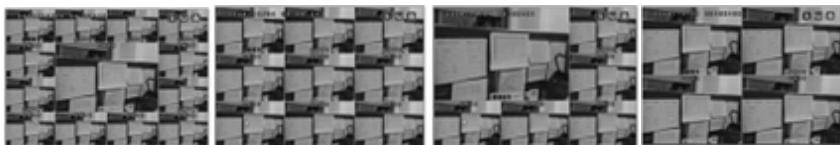
1. Auto sequence or PIP mode can be switched over to 16 channel display mode by pressing DISPLAY button.

2. Live mode is switched over to 16 channel display → 13 channel display → 9 channel display → 6 channel display → 4 channel display mode in order by pressing DISPLAY button, or clicking the right button of mouse repeatedly.

NOTE

User can move to next channel by clicking the right button of mouse in single mode.

To return to divided channel mode, user needs to press on quick menu  or DISPLAY button on front panel.



13 channel display → 9 channel display → 6 channel display → 4 channel display

The display channel can be changed by pressing UP/DOWN button in divided channel mode as desired.

■ MOSAIC FUNCTION

User can make certain area in live mode blurred for private purpose.

Mosaic ON



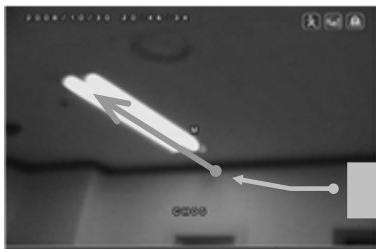
1. Select one channel that user likes to set up.

2. Put the mouse at the starting point you want, and drag it to the desiring area with left-button pressed.

3. This mosaic function is only available in display mode, and does not affect any recording data even if it is on when recording is triggered.

4. To release this function, drag mouse diagonally from the right bottom of set area with it pressed.

Mosaic OFF



Mouse starting point

NOTE

This mosaic function is only available at live display mode.

4.4 AUTO SEQUENCE (AUTO)

Live mode is automatically switched over to single channel or 4 channel mode with time interval that is set in display, and auto display mode in AUTO button pressing.

- Display mode setup : Menu > Display > Sequence > Mode : single or quad
- Interval setup : Menu > Display > Sequence > Interval : 1 sec ~ 60 sec.

Press the button again, and DVR stops this function.

To release this AUTO function, press DISPLAY button.

DVR skips the channel with no video when this function is triggered.

[Single channel]

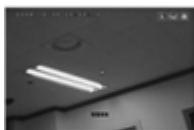


CH1

[4 channel]



CH1,2,3,4



CH2



CH5,6,7,8



CH3



CH9,10,11,12



CH4

.



CH13,14,15,16

.

4.5 DIGITAL ZOOM

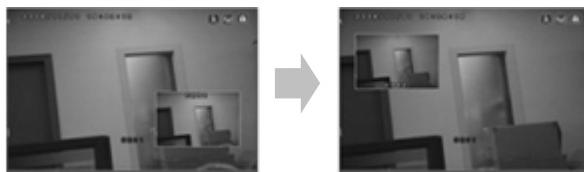
User can magnify the area that he wants 2 times digitally.



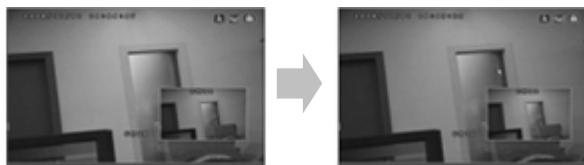
1. Click on Q.MENU and select the area that you want by pressing direction key buttons.
2. Press ENTER button, and the picture inside angle is magnified digitally. This function is only available at single channel .
3. To release this function, press the ZOOM button again.

4.6 PIP

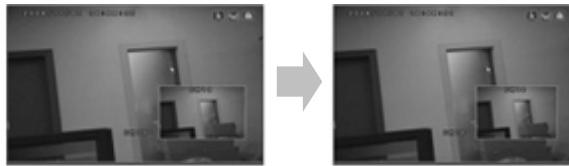
- User can monitor small channel together in single channel mode.
- User can monitor main channel and sub channel together in single channel mode.
- Various PIP modes are displayed when pressing PIP button repeatedly.



- The sub channel location is changed when pressing PIP button, or clicking the right button of mouse.

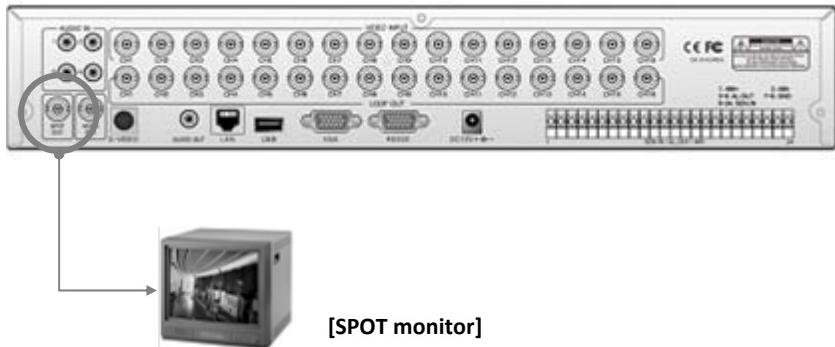


- The sub channel display is changed when pressing LEFT / RIGHT button of direction key on front panel.



- The main channel display is changed when pressing UP / DOWN button of direction key on front panel.
- To stop this function, press DISPLAY button.

4.7 SPOT

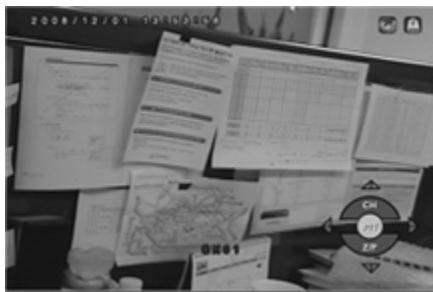


- 48
1. This function leads to only monitor additional monitor as well as main monitor .
Main monitor offers all functions of DVR like menu set up, live video display
(divided channel display) , and playback. But SPOT monitor supports only live single
channel, or live 4 channel display.
 2. SPOT monitor also supports AUTO SEQUENCE function, and can set up time interval
as user wants.

4.8 PTZ

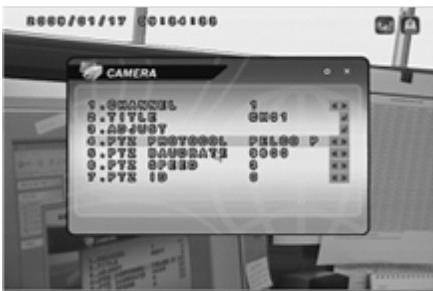
PTZ set up is required in menu set up, and PTZ is used for controlling camera with PAN/TILT/ZOOM/FOCUS.

1. Press PTZ button in live divided 16 channel mode, and single channel mode appears.
2. Press ENTER button, and move to each menu like CH, P/T, Z/F.
3. PTZ camera is controlled with LEFT / RIGHT buttons on front panel, mouse, or remote controller.
4. To release this function, press PTZ button again.



□ CH : Channel change
□ P/T : PAN & TILT control
□ Z/F : ZOOM & FOCUS control

To function above, please setup PROTOCOL, BAUDRATE, SPEED, ID from MAIN MENU>CAMERA.



CAUTION

Make sure that PTZ speed dome camera is properly installed on the relevant channel before PTZ operation.

NOTE

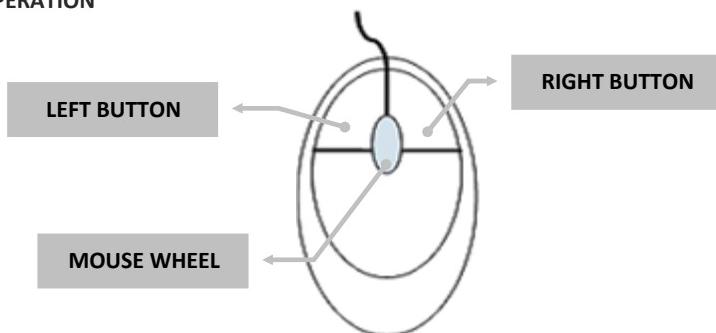
PTZ mode is available at live single display mode only, not controlled by divided channel display mode.

To release this function, press PTZ button again.

4.9 MOUSE

By using USB mouse, setting values can easily be adjusted, or changed.

■ MOUSE OPERATION



1. Left button

- To select menu or to confirm setting value
- To move to 16/13/6/4 CH in display screen mode
- To revert into the previous multiple screen mode from 1 CH single screen mode

2. Right button

h display screen mode

- 13 multiple screen mode : To move to next channel by one channel.
- 9 multiple screen mode : To move to 1-9 channel and 8-16channel
- 6 multiple screen mode : To move to next channel by one channel
- 4 multiple screen mode : To move to 1-4, 5-8, 9-12, 13-16 channel
- To move to next channel from single channel in play back mode
- To change sub-channel in PIP mode

■ KEY BUTTON OPERATION ON FRONT PANEL

1.  : To move cursor to left, or right
2.  : To move cursor to up, or down
3.  : ENTER button. To activate the corresponding function.
4. Q.MENU : To get out of current menu

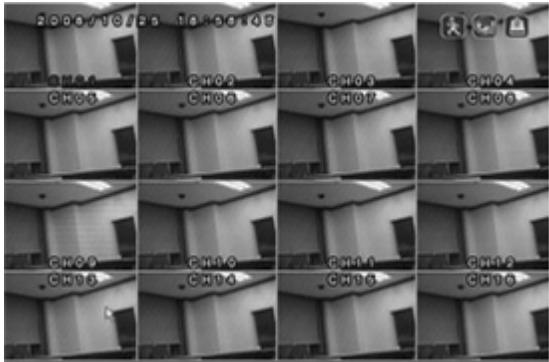
■ Remote controller operation

1.  : To move to left or right
2.  : To move to up or down
3.  : ENTER button. To activate the corresponding function
4. Q.MENU : To get out of current menu

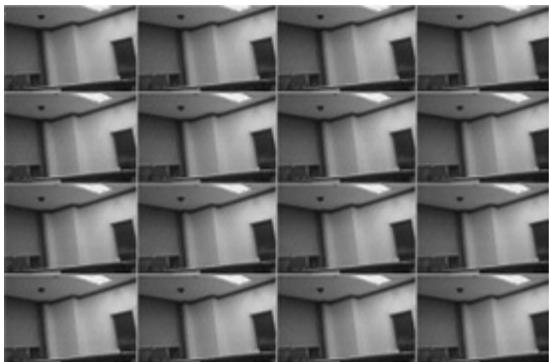
4.10 OSD

► Time, channel name, and motion activating icon can disappear in order in display mode. Press OSD button on front panel , or  button on Q.MENU by stage.

[OSD ON]



[OSD OFF]



4.11 RECORDING

4.11.1 NORMAL RECORDING

Press REC button, and LED is lighted with red color. Recording starts with record icon and  appeared at the right upper side. To release recording, press REC button again and record icon also disappeared accordingly.



When recording starts, or releases, the message of START RECORDNG appears, and disappears at the bottom of right side.

CAUTION

1. Factory default is set to function the schedule recording .
2. In recording release, record setup should be released from schedule record menu.
3. In release of schedule recording, REC button on front panel can be set, and recording releases.

NOTE

1. Password approval is pre-requisite to stop recording.
2. In the mode of record setup menu, auto recording is effected at the time user wants. (Please refer to schedule record setup from setup menu.)

HDD RECORDING CAPACITY TABLE

*16CH , HDD250GB/STD

RESOLUTION		QUALITY 4				QUALITY 3				QUALITY 2				QUALITY 1			
SUPER	7.5	1	day	6	hour	2	day	3	hour	3	day	0	hour	4	day	0	hour
	6	2	day	2	hour	3	day	13	hour	5	day	0	hour	6	day	16	hour
	5	2	day	10	hour	4	day	2	hour	5	day	18	hour	7	day	17	hour
	3	4	day	13	hour	7	day	17	hour	10	day	21	hour	14	day	12	hour
	2	5	day	13	hour	9	day	9	hour	13	day	5	hour	17	day	11	hour
	1	6	day	10	hour	10	day	19	hour	15	day	4	hour	20	day	0	hour
HIGH	15	2	day	23	hour	5	day	2	hour	7	day	5	hour	9	day	19	hour
	10	3	day	18	hour	6	day	11	hour	9	day	4	hour	12	day	16	hour
	7.5	4	day	14	hour	7	day	17	hour	10	day	20	hour	14	day	8	hour
	6	4	day	23	hour	8	day	8	hour	11	day	17	hour	15	day	12	hour
	5	5	day	13	hour	9	day	10	hour	13	day	7	hour	17	day	21	hour
	3	6	day	4	hour	10	day	10	hour	14	day	16	hour	19	day	10	hour
	2	8	day	13	hour	14	day	14	hour	20	day	15	hour	27	day	18	hour
	1	10	day	15	hour	18	day	4	hour	25	day	17	hour	34	day	17	hour
LOW	30	4	day	10	hour	7	day	14	hour	10	day	18	hour	14	day	16	hour
	15	7	day	5	hour	12	day	6	hour	17	day	7	hour	23	day	4	hour
	10	9	day	3	hour	15	day	15	hour	22	day	3	hour	29	day	21	hour
	7.5	11	day	20	hour	20	day	3	hour	28	day	10	hour	37	day	22	hour
	6	12	day	13	hour	21	day	9	hour	30	day	5	hour	40	day	13	hour
	5	12	day	19	hour	21	day	17	hour	30	day	15	hour	40	day	22	hour
	3	14	day	11	hour	24	day	15	hour	34	day	19	hour	46	day	17	hour
	2	16	day	18	hour	28	day	10	hour	40	day	2	hour	53	day	8	hour
	1	17	day	8	hour	29	day	10	hour	41	day	12	hour	55	day	9	hour

- ▶ Please calculate, and apply HDD recording time of 8ch, or 4ch DVR based on this table.
- ▶ This table based on the test result of our R&D Institute.
- ▶ This table is subject to change without prior notice, depending on user's environment.

4.11.2 EVENT RECORDING

Event recording is automatically reserved according to time, and date when event setup is set to record setup mode in system setup menu.

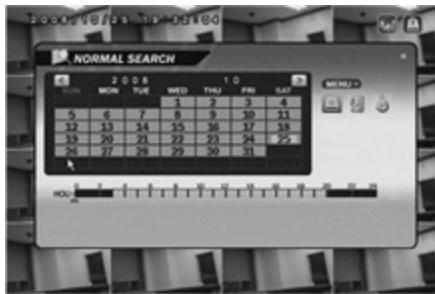
4.11.3 SCHEDULE RECORDING

Schedule recording is automatically played according to time, and date to be set when schedule setup is set to schedule setup mode in system setup menu.

4.12 SEARCH

Press SEARCH button on front panel, and the following SEARCH menu appears on screen.

Recorded video can be searched, and play backed by NORMAL search (time, and date), by EVENT, and by TIME, performing recording&searching simultaneously.



To cancel recording search, and to get back to live display mode, press SEARCH button repeatedly.

4.12.1 NORMAL SEARCH (DATE, AND TIME SEARCH)



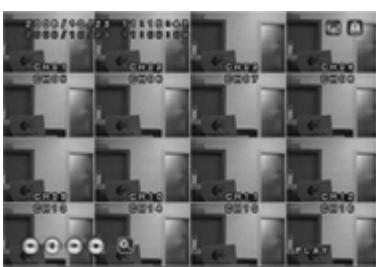
After pressing SEARCH button, move to the date with yellow color, and press ENTER button.



When time graph appears, move to the time user wants, and press ENTER button while time is in yellow color.



When minute graph appears, move to the area in yellow color, and press ENTER button at the area you want.



Recorded video is played back at selected date

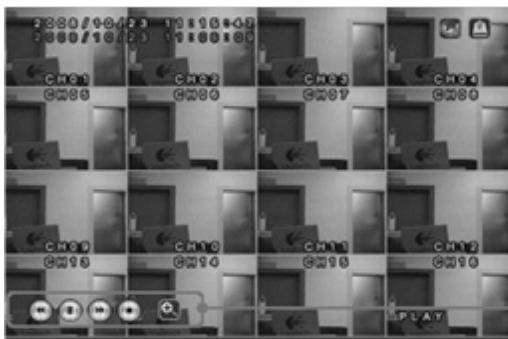
** To stop search, and to return to live display mode, press STOP button.

NOTE

1. Press MENU button to move to normal search, event search, and date search.
2. Move monthly moving search by pressing UP/DOWN direction key button.
3. The yellow area means recording date in search menu.
4. Search is possible after checking playback to this area.

■ REW,PLAY/PAUSE,FAST,STOP

For the file searched by recording search , playback can be controlled through below icon button.



In recording display mode, digital zoom function is available in selection of zoom icon after choosing of the relevant channel. On front panel, use after pressing the relevant button each.

- REW (High speed playback) : Pressing REW button in playback display mode, playback is faster than normal speed (x2, x4, x8, x16, x32)
- FF (fast forward) : Press FAST button in playback display mode, playback is faster than normal speed in the opposite direction. (x2, x4, x8, x16, x32)
- PLAY / PAUSE : Press PAUSE in playback display mode, playback stops temporarily . Press button again, playback starts again.
- STOP : Press STOP button in playback display mode, live display mode is switched over.

NOTE

After temporary pause in playback display, press FAST/REW button.
Playback by frame is possible.

4.12.2 EVENT SEARCH

User can search the recording data for motion, sensor detection.



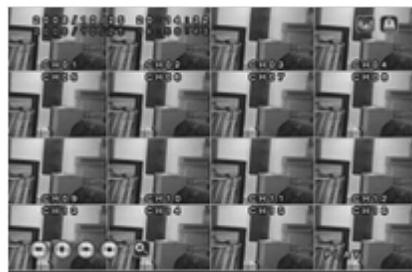
- Press Q. MENU button on front panel, and move to event search menu.
- Press enter button on the date in yellow.
- Event type : To search event recording data by all, motion, sensor
 - Motion : Motion detection record
 - Sensor : Sensor detection record
- Channel selection : User can select by all channels, or each channel .
- Move to the yellow area on time graph. And find the time range you want, moving to there. Then, press ENTER button, and event list appears.



PAGE : 0001/0042

It means current & total page.
Each page has 10 recording lists.
Move to next page by left □,
right □ button and go to
recording list by up ▲,
down ▼ button.

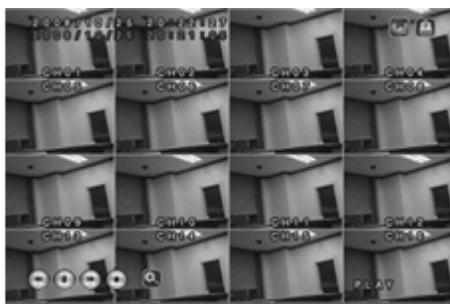
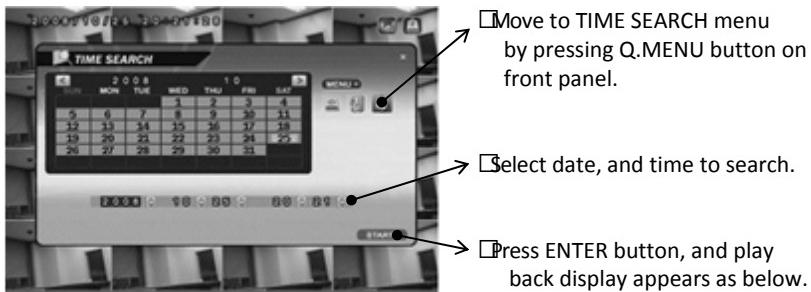
- Press search button in the relevant screen, and DVR displays search screen as below.



- To monitor event search of other channels, press DISPLAY button, and search the relevant channel.
- To stop search mode, and get back to live display mode, press STOP button.
- If user gets out of this menu, press STOP first, and then SEARCH button.

4.12.3 TIME SEARCH

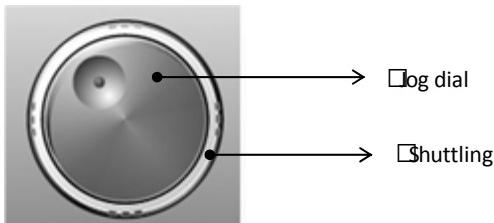
User can directly input his wanting time & date. He is able to search them.



To stop this search mode, and return to live display mode, press STOP button

4.12.4 JOG SHUTTLE SEARCH

By using jog shuttle, user can more conveniently search recording data in playback mode.



- Jog dial : Convenient to search frame by frame, and the detailed motion in short time in pause mode.
- Shutting : To control, and search playback speed by max. 32 times both in forwarding, and opposite direction.

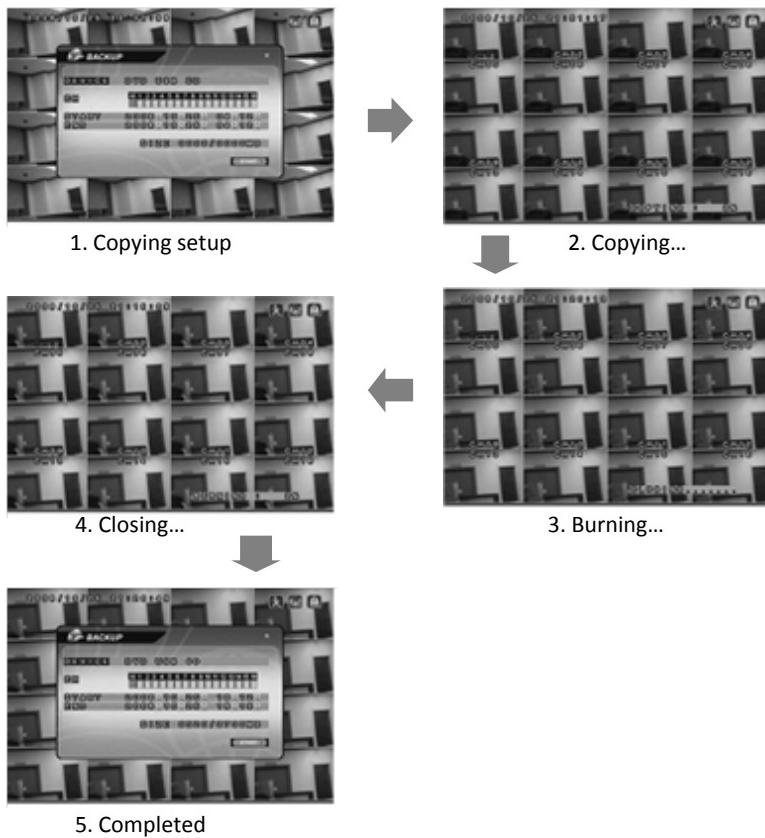
NOTE

This function is applied to premium DVR only.

4.13 BACK UP

User can have backup recorded video display after setting the wanting time with DVD±RW,CD±RW, and USB memory stick. Press backup button, and select media to copy.

**** MEDIA FOR BACK UP : DVD± RW,DVD± R,CD± RW,CD± R,USB MEMORY STICK**



1. Insert blank CD in DVD ROM of DVR.
2. Select DVD ROM from DEVICE selection, and press ENTER button.
3. With the use of direction key button, set up channel, time, date and minute to copy respectively.
4. The copied data size is automatically calculated.
5. Press "START", and back up is completed after above 5 stages.
6. Press BACK UP button to exit to menu.

NOTE

1. The format of DVD ROM is automatically performed.
2. Set up START time, and END time is automatically set proportional to media capacity. To changing back up capacity, separate setup is possible.
3. One sheet of DVD supports the capacity of 4.5G(4500MB), and copying time is about 35 minutes.
4. In abrupt switch off, or copying not carried out normally, take out DVD ROM media, and start it from the first stage by re-insertion.
5. USB copying is in the same way as above.
6. Normal backup may not properly be performed for less than USB free size of 512 MB .

CAUTION

1. Don't remove DVD-ROM, or USB Memory Stick forcefully while copying. It may cause system shutdown.
2. The file viewer function may be changed into dependent upon the specification of computer system.

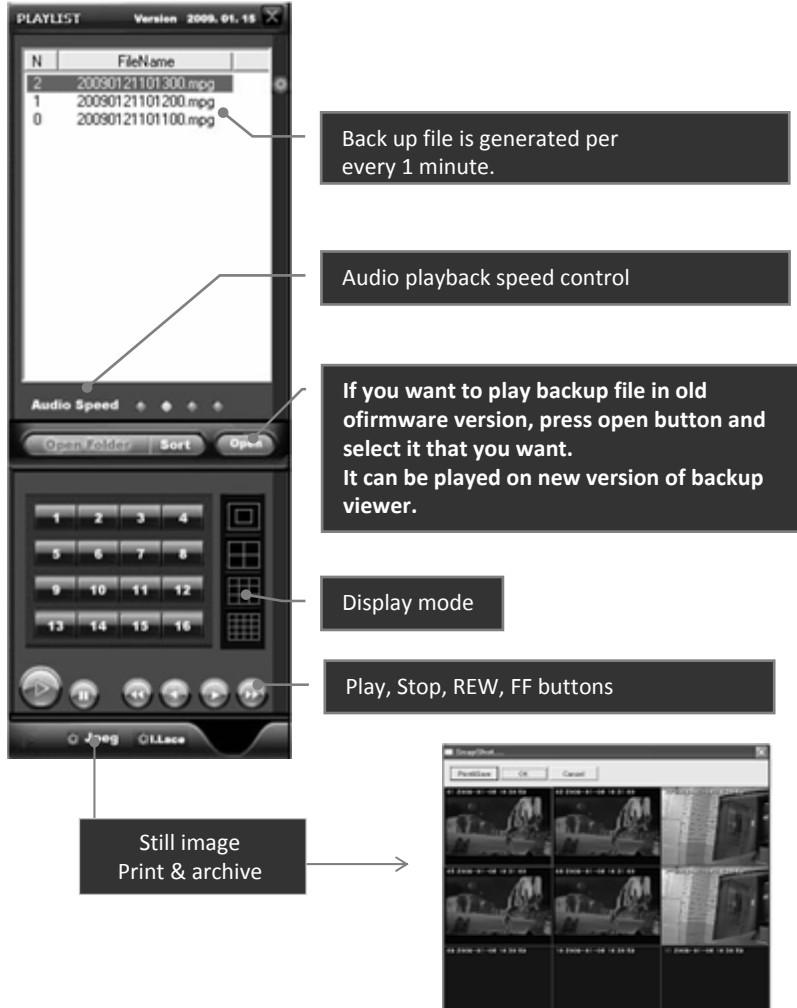
4.14 BACKUP VIEWER

User finds the files below when double clicking backup file.



When installing File viewer program, backup file list appears. Each backup file has 1 minute long data.

Double click one from backup file list, it is played.



SETUP MENU

5.1 FACTORY DEFAULT

MAIN MENU	SUB MENU	DEFAULT	
Q.menu	1.Language	English	
	2.Resolution	High	
	3.Quality	3	
	4.Overwrite	Yes	
	5.Pre-record	Yes	
	6.Remote ID	ALL	
Camera	1.Channel	1	
	2.Title	CH01	
	3.Adjust	1.Contrast	5
		2.Brightness	5
		3.Hue	5
		4.Saturation	5
		5.B/W	No
	4.PTZ Protocol	OFF	
	5.PTZ Baudrate	9600	
Display	6.PTZ speed	3	
	7.PTZ ID	0	
	1.Sequence	1.Conversion type	Single
		2.Conversion interval	01 second
	2.Osd Display	1.Icon	Yes
		2.Title	Yes
Record		3.Date/Time	Yes
	3.Video loss	OSD	
	4.SPOT	1.Mode setup	Single
		2.Interval setup	01 second
	5.Video Format	NTSC	
	1.Resolution	High	Quality 3
Record	2.Watermark	No	
	3.Schedule Setup	ON	
	4.Audio Setup	1.Input 1	1
		2.Input 2	2
		3.Input 3	3
		4.Input 4	4
Record		5.LIVE output	Input 1
	5.Overwrite	ON	

MAIN MENU	SUB MENU	DEFAULT	
Event	1.Sensor	Osd	
	2.Sensor type	Off	
	3.Notion	Off	
	4.Motion set	1.Trace 2.Sensitivity 3.Area	Off 4 Off
	5.Alarm	1.Alarm1 2.Alarm2 3.Alarm3 4.Alarm4	Off Sensor Motion Loss
	6.Event time	10seconds	
	7.POP-UP	Off	
	8. Pre-record	On	
Network	1.IP setup	1.Type 2.IP address 3.Subnet 4.Gateway 5.Command Port 6.Video Port 7.Web Port 8.PPPoE	Dhcp XXX.XXX.XXX.XXX XXX.XXX.XXX.XXX XXX.XXX.XXX.XXX 9201 9202 80 1.Id 2.Password
	2.DDNS	1.Dns IP 2.Url 3.Port 4.IP Renewal	164.124.101.002 Videonetserver.com 20000 10minutes
	3.E-MAIL	1.Send E-MAIL 2.SMTP server 3.Period 4.Test	@ .COM 1. Type:Default 2. Name 3. Port 4. Id 5. Pw Off
	4.DVR NAME	Dvr	Kornet.net
	5.DVR location	Dvr01	***** *****
System	1.Language	English	
	2.Date, time	1. Type YY-MM-DD	
	3.User setup	1.Admin setup	1.Id 2.Password
		2.User setup	1.User 2.Id 3.Password 4.Authority Setup Search Backup Rec Off
	4.HDD format	1.HDD 2.Format	HDD1 No
	5.Controller	Type	RS-485
	6.System log		
	7.information		
Update	8.Reset	1. Factory reset 2. Set -value copy 3. Set-value load	
	1.Device 2.Update	USB	

5.2 QUICK SETUP



5.2.1 LANGUAGE - English, Korean, Chinese, Russian Etc.

This DVR supports 14 countries of language. Select wanting country language with the use of left & right direction key. Factory default set in English.

5.2.2 RESOLUTION

The recording resolution can be selected super, high and low.

Super (set up till D1 7.5FPS)

High (set up till HD1 15FPS)

Low (set up till CIF 30FPS)

5.2.3 QUALITY / 1, 2, 3, 4

The recording quality can be set up based on recording resolution
The HDD capacity differs from the setting values of 1, 2, 3, 4.

5.2.4 OVERWRITE / ON, OFF

Once HDD capacity reaches the full size, it again returns to the first stage.
It carries out the Overwrite (yes), and records continually. In setting "No",
"HDD FULL" appears at the bottom of display, and record stops.

5.2.5 PRE-RECORD / ON, OFF

Execute, and finish the event recording, and recording time can be extended to
2~3 seconds more than set time.

NOTE

Pre-recording is basically set for about 2~3 seconds, though not in menu.

5.2.6 REMOTE ID / 1, 2, 3, 4, ALL

Install the various DVRs at the same place, and one remote controller can control
various DVRs respectively by granting ID to them. Only remote controller can be
used to control. Setting values are ranged into 1~4, and ALL.

5.3 CAMERA



5.3.1 CHANNEL / 1~16

Select camera No. to set up

5.3.2 TITLE / CH 1-CH 16

User can set up the installed camera's name by each channel. By moving direction key, press ENETR button, and window appears as below.



Change the name of No. 1 camera, and press ENTER after inserting the name with use of mouse, or direction key at the bottom of window. Like the picture on right side, No. 1 camera's name is changed, and stored. Other cameras have the same way

NOTE

1. To set up it by maximum 8 letters
2. Korean name not supported
(OSD : No. English capital & small letter, Special sign)
3. Default : channel 1.

5.3.3. ADJUST

To set up display mode by channel.

1. Contrast : 1-9 stage
2. Brightness : 1-9 stage
3. Hue : 1-9 stage
4. Saturation: 1-9 stage
5. B/W : Yes / No

5.3.4 PTZ PROTOCOL / OFF, PELCO-P, PELCO-D

Select the matching protocol for PANTILT camera installed to the external.

NOTE

**Miss-matching protocol causes no working.
Contact manufacturer, or supplier if specified protocol is required.**

5.3.5 PTZ BAUDRATE / 2400, 4800, 9600, 19200, 115200

PTZ protocol means telecommunication speed. Select PTZ protocol suitable to installed camera. The low level decreases camera speed of 6 Band ratio.

5.3.6 PTZ SPEED / 0,1,2,3,4

To control the speed of PTZ camera.

5.3.7 PTZ ID / 0~255

To set up PTZ camera ID.

5.4 DISPLAY



5.4.1 SEQUENCE

Sequentially auto display conversion is set up from 1-16 channels in live display screen.

1.1 MODE / SINGLE, QUAD



To set up 1channel, or 4 channel

1.2 INTERVAL (1-60 Second)

To set up the interval of auto display conversion.

5.4.2 OSD DISPLAY

User can delete icon, title, date, and time by degree in live display screen.



2.1 ICON / ON, OFF

To set up icon deletion in live display.

2.2 TITLE / ON, OFF

To set up the deletion of camera's name in live display.

2.3 DATE, TIME / ON, OFF

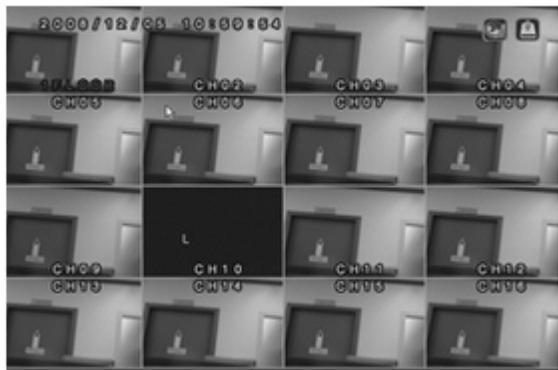
To set up the deletion of date, and time in live display.

NOTE

OSD deletion function not supported in playback display.

5.4.3 VIDEO LOSS

When the real-time camera video loss occurs, it advises BLANK loss status to the relevant channel, or show "L" letters.



►OFF : Not Supported

►OSD : Display video loss status in letter on display

►OSD + BEEP : Display video loss status in letter, and buzzer sound.

►BEEP : Display video loss in buzzer sound

5.4.4 SPOT / SINGLE , QUAD



Select single, and QUAD mode.
Set up conversion interval of
SPOT monitor.



When the conversion interval is
disabled, set one channel of 1~16
ones.
The function of auto display
conversion can be added.

5.4.5 VIDEO FORMAT / NTSC, PAL

User can set the receiving type of respective camera installed each area.

5.5. RECORD



5.5.1 RESOLUTION

Selectable to recording resolution pertinent to user's environment.

SUPER (QUALITY) 1 / 2 / 3 / 4 7.5IPS per each channel

SIZE & SUPER		QUALITY		SIZE	
CH	SIZE	IPS	CH	SIZE	IPS
1	0	7.5	0	0	7.5
2	0	7.5	1	0	7.5
3	0	7.5	11	0	7.5
4	0	7.5	12	0	7.5
5	0	7.5	13	0	7.5
6	0	7.5	14	0	7.5
7	0	7.5	15	0	7.5
8	0	7.5	16	0	7.5

HIGH (QUALITY) 1 / 2 / 3 / 4 15IPS per each channel



USER SUPER (QUALITY) 1 / 2 / 3 / 4
HIGH (QUALITY) 1 / 2 / 3 / 4
LOW (QUALITY) 1 / 2 / 3 / 4

User is able to set resolution, quality, and recording as he likes to do. If he doesn't want recording, please set off IPS SETUP form USB SETUP USER. In playback, channel set OFF SETUP is playback in BLANK.

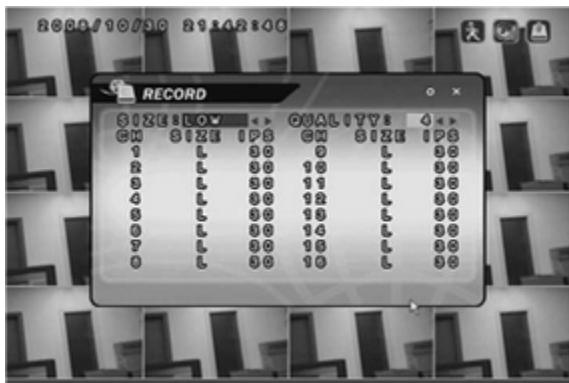
[Recording setup display-USER]



[Recording playback display]



LOW (QUALITY) 1 / 2 / 3 / 4 each channel 30IPS



NOTE

1. The recording resolution setup is related to HDD capacity.
2. The recording level (Quality) can be set to 1, 2, 3, 4.
3. Overwrite ON : When HDD is not enough space for back up, return to the first, and recording starts by overwriting the old data.

*RECORDING RESOLUTION

Resolution				Record ips	Quality			
1	704x480	D1	Super	1	4	3	2	1
2	704x480	D1	Super	2	4	3	2	1
3	704x480	D1	Super	3	4	3	2	1
4	704x480	D1	Super	4	4	3	2	1
5	704x480	D1	Super	5	4	3	2	1
6	704x480	D1	Super	6	4	3	2	1
7	704x480	D1	Super	7.5	4	3	2	1
8	704x240	HD1	High	1	4	3	2	1
9	704x240	HD1	High	2	4	3	2	1
10	704x240	HD1	High	3	4	3	2	1
11	704x240	HD1	High	4	4	3	2	1
12	704x240	HD1	High	5	4	3	2	1
13	704x240	HD1	High	6	4	3	2	1
14	704x240	HD1	High	7.5	4	3	2	1
15	704x240	HD1	High	10	4	3	2	1
16	704x240	HD1	High	15	4	3	2	1
17	352x240	CIF	Low	1	4	3	2	1
18	352x240	CIF	Low	2	4	3	2	1
19	352x240	CIF	Low	3	4	3	2	1
20	352x240	CIF	Low	4	4	3	2	1
21	352x240	CIF	Low	5	4	3	2	1
22	352x240	CIF	Low	6	4	3	2	1
23	352x240	CIF	Low	7.5	4	3	2	1
24	352x240	CIF	Low	10	4	3	2	1
25	352x240	CIF	Low	15	4	3	2	1
26	352x240	CIF	Low	30	4	3	2	1

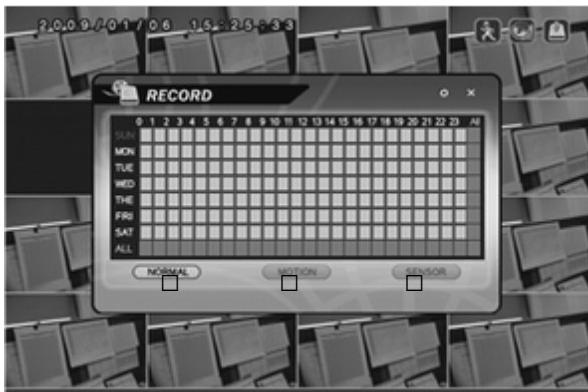
* Factory Default : "High", and Level "3".

5.5.2 WATERMARK / ON, OFF

Selection of watermark setup.

5.5.3 SCHEDULE SETUP

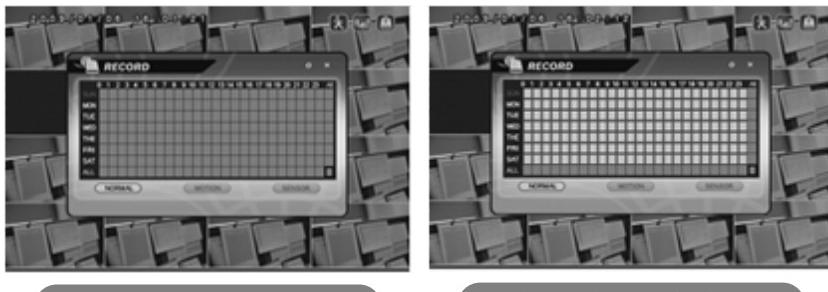
When schedule recording is set to " YES", automatic recording starts at the time, and date user wants.



With the use of mouse, or direction key on front side, press "ENTER" on wanting date & time, and schedule recording is changed into yellow green. The time area converted to yellow green is automatically recorded.

- NORMAL (Yellow green)** : Meaning of manual recording, and automatically recorded if fixed time falls on.
- MOTION (Sky blue)** : Auto recording of event video detected at wanting time.
- SENSOR (Orange)** : Auto recording of video detected from separately installed sensor.

Once schedule recording is set up, auto recording is possible without pressing REC button on date, and time user wants. For the schedule recording, there are normal record, motion recording and sensor recording.

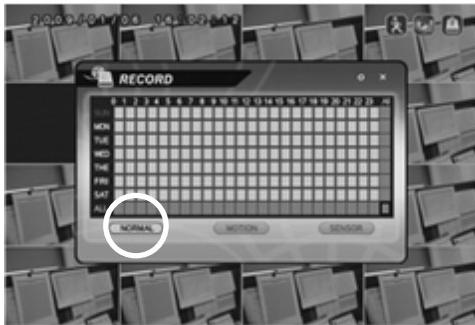


Schedule record release

Schedule record setup

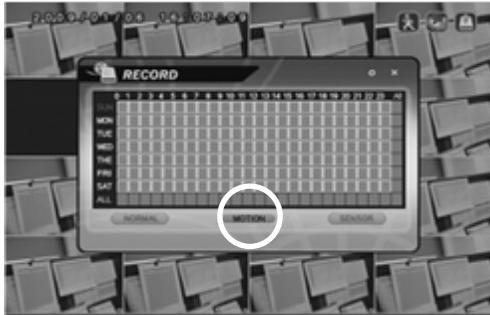
With the use of mouse, or direction key on front side, press "ENTER" button on wanting time, and date. If so, time of area to be converted to yellow green is automatically recorded.

NORMAL (Yellow green)



1. Once time approaches to the area painted in yellow green, auto record starts.
2. With the use of direction key, wanting time, and date are set up.
3. Press "ENTER" button, and set up. In case of release, press 'ENTER' button again.

□MOTION (Sky blue)



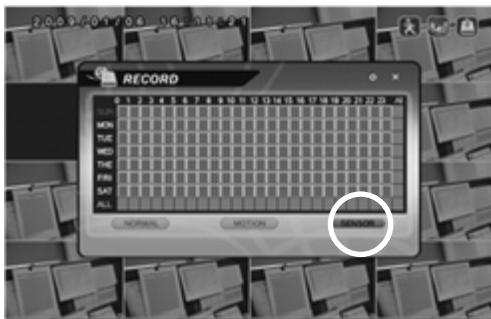
1. Sensor detects at the time of area painted in sky blue
2. In event schedule, the video of relevant channel is automatically recorded.



NOTE

The following is needed when motion recording is set up.

- 1) **NORMAL recording setup ON** : As above picture, 'M' appears on display when not having motion recording from 9~11 AM to 16~18PM, but event recording list is not appeared. At normal recording, recording works normally.
- 2) **NORMAL recording setup OFF** : As above setup, undesignated area is not recorded.
→ In all recording, schedule recording setup has its priority.
- 3) Event list is recorded for 10 seconds from the first motion happening (if 10 seconds are set up). If motion is continually detected for 10 seconds, recording time is prolonged, and shows one event list.
- 4) Normal recording is more secure than motion recording when the place (bank, train station, etc) motion is going on for long times.



SENSOR (Orange)

Automatically recording sensor video that is detected at the time of area painted in orange.

NOTE

If schedule recording is set, it has recording prior to motion and sensor one in turn.

5.5.4 AUDIO INPUT1,INPUT2,INPUT3,INPUT4,LIVE OUTPUT

Maximum 4 audio input, and one audio output.

In activating audio function, audio icon  appears at the top of display screen.



- **Input** : Select 4 channel of 1~16 ones, and input.



- **Output** : Select 1 of input 4 channels, and output. The **channel color is showed in red**.

5.5.5 OVER WRITE / ON, OFF

When HDD reaches full size of capacity, it returns to the first stage, and continually records by executing overwrite. In "NO", "HDD FULL" message appears at the bottom of display screen, and record stops.

5.6 EVENT

User can set up with 'ENTER" button, or MOUSE the detailed article necessary to event record



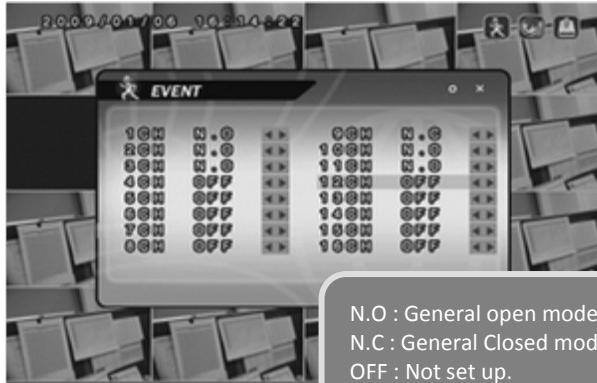
5.6.1 SENSOR / OFF, OSD, OSD + BEEP, BEEP

In sensor detection, select display mode on screen.

5.6.2 SENSOR IN

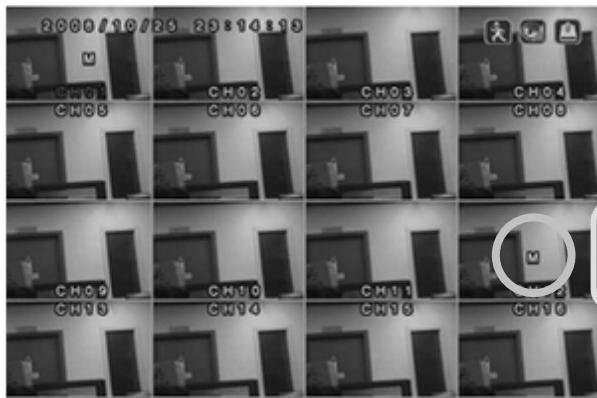
►CH 1 ~ 16 N.O / N.C / OFF

►User can set up the sensor mode for the relevant channel.



5.6.3. MOTION - OFF, OSD, OSD + BEEP, BEEP

In sensor detection of person, or object, select text on the display screen.



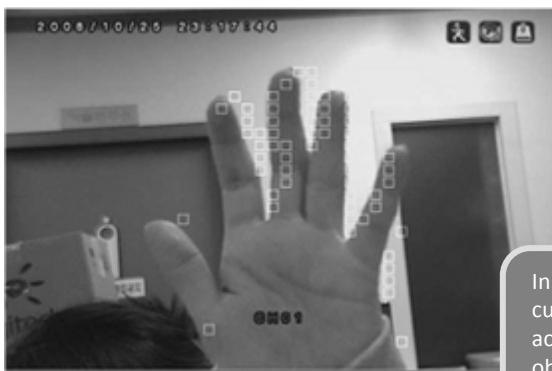
In setting up "LETTER",
"M" appears.

5.6.4 MOTION SET

User can set up motion detail by each channel.



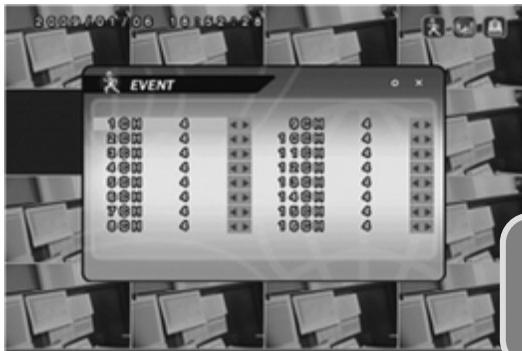
(1) TRACE (ON, OFF)



In motion sensor detection,
cursor appears in activation
according to the moving
objects.

(2) SENSITIVITY (1 - 8)

User can set up moving sensitivity by each channel.



With the use of either left & right direction key, or mouse, it can set up 1~8, and default is set 4.

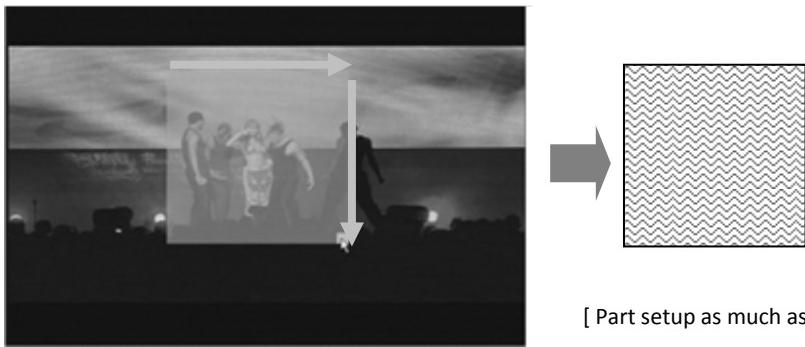
(3) AREA (FULL, SET, OFF)



- FULL : Full part
- SET : User's area set up
- OFF : Not set up

User can set up record area of motion by each channel, and is available to setup, and release of wanting area from user's menu.

- In "SET" position, set area appears on the display in yellow green by pressing "ENTER" button with direction key moving.
- In using "MOUSE", drag left mouse, and set up its area in the below direction.

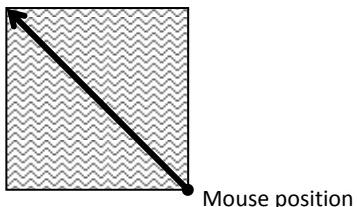


[Part setup as much as drag]

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[Mouse release]

- In "SET" position, it is changed into display of yellow green when pressing "ENTER" button with direction key moving.



By dragging the set area by mouse in diagonal direction, it is released.

5.6.5 ALARM



- Alarm 1 Sensor, Motion, LOSS, OFF
- Alarm 2 Sensor, Motion, LOSS, OFF
- Alarm 3 Sensor, Motion, LOSS, OFF
- Alarm 4 Sensor, Motion, LOSS, OFF

5.6.6 RECORD TIME (10 SECOND ~ 10 MINUTE)

- In event occurrence, continual recording time is set.
- In event happening before continual recording time is released, recording time is extended from the point of its occurrence.

5.6.7 POP - UP , ON , OFF

- In event occurrence, the relevant display is enlarged, and popped up to the full display.
- But, in simultaneous event happening more than 2 channels, it is converted to split display mode .

5.6.8 PRE - RECORD / ON , OFF

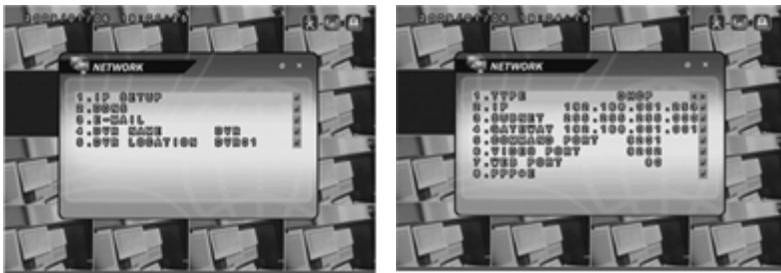
- When event rerecording is executed, and finished, additional 2-3 seconds of recording is progressed than the time of set recorded one.

ex) If event is triggered at 3:10, it records videos from 3:09: 57.

5.7 NETWORK SETUP

5.7.1 IP SETUP

IP address can be allocated to PC that is connected to the network



1) IP Type (STATIC / DHCP / PPPoE / OFF)

Select the type to match user's network environment .

1-1) STATIC : Fixed IP

Type that user directly sets up IP information to DVR that IP service provider allocated.

1-2) DHCP : Floating IP

Type that DVR automatically receives IP by DHCP server.

1-3) PPPoE : Type that has direct connection with the external without sharing internet (router).

User should insert ID, and password IP service provider provides.

1-4) Not connecting

2) IP address (000.000.000)

Input IP address that user subscribed ISP (internet service provider) provides.

3) Subnet mask (000.000.000)

Input the address of subnet mask ISP (internet service provider) provides.

4) Gateway (000.000.000)

Input the gateway address ISP (internet service provider) provides.

5) COMMAND PORT (9201)

In computer connection, port can be changed. Port can appear differently based on the set up of the relevant network status (like fire-wall, etc.). The factory default is set in 9201 for port.

6) VIDEO PORT (9202)

It is needed for video transmission by network.

7) WEB PORT (80)

It is needed for monitoring by internet explorer without client software program. (Net viewer).

8) PPPoE (PASSWORD / ID)

Input password, and ID ISP (internet service provider) provides

5.7.2 DDNS



- 1) DNS IP (000.000.000.000)
- 2) URL VIDEONETSERVER.COM
Input DNS IP address.
In manufacturer's DNS use, URL is used for default value.
- 3) PORT (20000)
Input DNS URL. In manufacturer's DNS URL use, port can be used for default values.
- 4) IP RENEWAL (10 MINUTES / 20MINUTES / 30MINUTES)
Input the allocated port to DNS server.
DVR itself makes sure of unusual status of IP every set time.

5.7.3 E-MAIL



1) SEND E-MAIL (YES / NO)

_____@_____com

In EVENT happening, insert e-mail address to send the relevant display.

2) SMTP SERVER

In sending E- mail, insert SMTP & DNS server.

2-1) TYPE DEFAULT / USER

2-2) NAME KORNET.NET

2-3) PORT 25

2-4) ID *****

2-5) PW *****

3) PERIOD (ONCE / EVENT / OFF)

In sending e-mail, user has to decide if, or not he will send event occurrence at one time per day, or whenever event occurs.

4) TEST

Possible to transmit just happening event for test.

5.7.4 DVR NAME (DVR)

Input each ID to separate each DVR that gets access to CMS.

5.7.5 DVR LOCATION (DVR01)

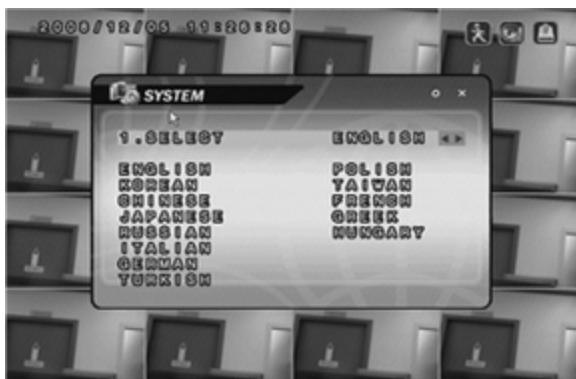
Input the location to display DVR position respectively that gets access to CMS.

5.8 SYSTEM



5.8.1 LANGUAGE

Select language to use, and convert to the selected one when pressing ENTER button.



5.8.2 DATE / TIME

On the receipt of this DVR, set the current time correctly, and start recording.



5.8.3 USER SETUP

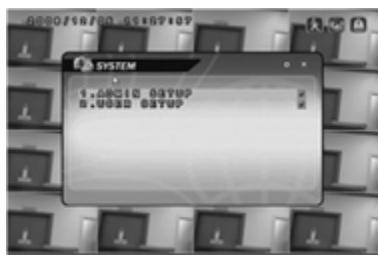
User can set up the right of DVR management by user.



1) ADMIN SETUP

- ID XXXXXXXX
- PASSWORD XXXXXXXX

Admin mode has the authority to set up, and release all of functions for DVR.





2) USER SETUP

- ▶USER USER 1 ~ USER 3
- ▶ID xxxx
- ▶PASSWORD xxxx
- ▶AUTHORITY
 - ▶SETUP ON / OFF
 - ▶SEARCH ON / OFF
 - ▶BACKUP ON / OFF
 - ▶REC OFF ON / OFF

User mode is entitled to set up, and release some functions of DVR. According to administrator's purpose, it can limit the controlling authority of users.

5.8.4 HDD FORMAT

As HDD formatting function, be sure to check it in order to prevent the deletion of HDD record data.



In case of selecting YES,
format starts.

NOTE

In HDD format execution, the current data in HDD are all deleted.
So, check once again execution status before it.

5.8.5 CONTROLLER

To set up interface used for external controller.



1) RS-232

- BAUDRATE 115200
- DATA BIT 8 BIT
- PARITY NONE
- STOP BIT 1 BIT

2) RS-485

- BRAUDRATE EACH
- DATA BIT 8 BIT
- PARITY NONE
- STOP BIT 1 BIT

5.8.6 SYSTEM LOG

As a menu to check all data for DVR use, user can check such acceptable data as menu access, manual record, switch on/off, network, back up, and search.



5.8.7. INFORMATION

Press info button, it shows the information on HDD/DVD/USB connected to



- ▶HDD brand, and manufacturer
- ▶Total capacity of HDD (Recorded capacity display)
- ▶Feasible capacity for HDD recording



Press up & down button
and move to next page.

- ▶Network IP and Mac address
- ▶Current software version



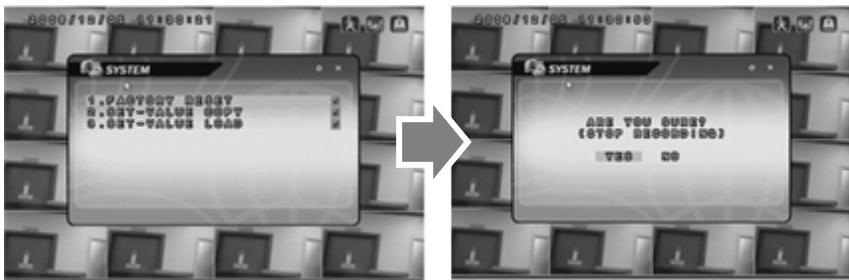
To exit from this menu,
press INFO button again.

- ▶ USB Model No.
- ▶ DVD RW Model No.

5.8.8. RESET

As a menu to initialize DVR system, it is changed into factory default for all setting values user set up.

1) FACTORY RESET (YES / NO)



In case of pressing YES button, initialization starts.

2) SET - VALUE COPY (YES / NO)

In setup of various DVR identically, user can copy one DVR setting values, and insert the same input values.

3) SET - VALUE LOAD (YES / NO)

By executing setting values copied, user can repeatedly insert the same setting values to various DVRS.

NOTE

For some problem on our DVR, copy the setting values, and back up it in USB. And then send the stored USB to our e-mail, prompt action will be taken.

5.9 UPDATE

User can update DVR system with new firmware easily by USB and network.
DVR system update should be available only in condition that HDD is connected to DVR properly.

5.9.1 USB UPDATE

Firmware download from Web Hard

Go to www.webhard.net and log-in.
ID:kprotech / PW: kpro1234 / Location : Download only

- Download new firmware file and unzip it.



dvr-2008-12-10-12-00
이미지 파일
27,904KB



crc_check.txt
텍스트 문서
1KB

- Create "update" folder (small letter) in USB memory stick and copy "dvr-2008-12-10 (firmware file)" & "crc_check.txt" to the folder.

- Insert USB memory stick into DVR and update DVR with new firmware.
(Main menu > Update> Device - USB > Yes)



Firmware download from Internet Explorer

- Type in the address below on internet explorer.
Do not change any letter and input it as it is.

HTTP://videonetserver.com/UPGRADE-MH/kpro/dvr.zip

- Unzip downloaded file from the address and three files appears.



[Firmware file] [Firmware size check program] [Firmware size indicator file]



A. Open "crc_check.txt" first and check firmware file size. (ie. D4C4E536).
Install "CheckCRC" program.



B. Click "Select File" button and select firmware file.

C. It shows the file size (ie. D4C4E536).
The file size of every firmware version has its own size.
When the size is same as one of firmware file, full size of firmware is downloaded properly.
If there is a discrepancy, you have to try to download it again.

- Create "update" folder (small letter) in USB memory stick and copy the firmware checked by "CheckCRC" program into the folder.

- Insert USB memory stick into DVR and update DVR with the new firmware.
(Main menu > System update > Device- USB > Update - Yes)

NOTE

Firmware download from "Web Hard" is recommended.

5.9.2 NETWORK UPDATE



NOTE

It may fail due to user's Internet environment.
In this case, USB update (by Web Hard download) is recommend.

- Update DVR by network.
(Main menu > System update > Device - network > Update - Yes)
It normally takes 4 ~ 6 minutes.



5.9.3 UPDATE

In system update menu, it shows current firmware version and new one.

- ▶ OLD S/W : it means current firmware version.
- ▶ NEW S/W : it means new firmware version to update.

MULTI NET VIEWER PROGRAM

6.1 DEFINITION

Net Viewer is a client software program that makes users operate DVR (monitor, playback, and backup) remotely through network.

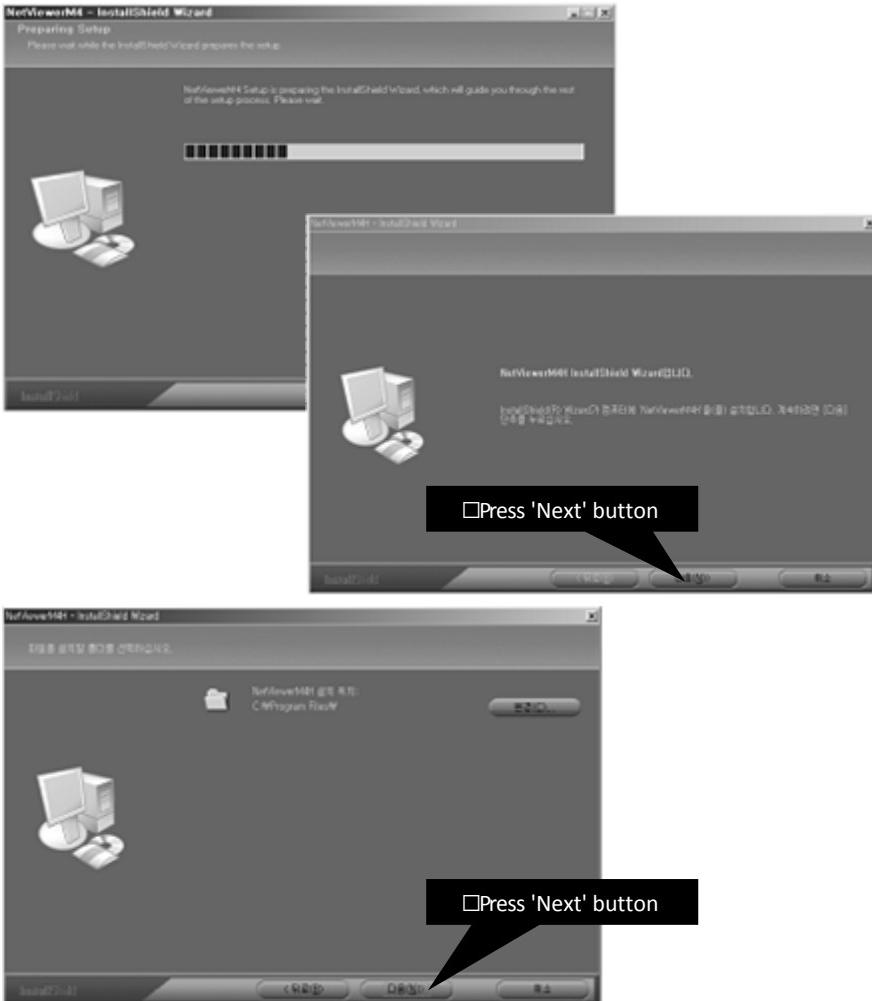
Please kindly read out this manual thoroughly for set up, and proper operation.

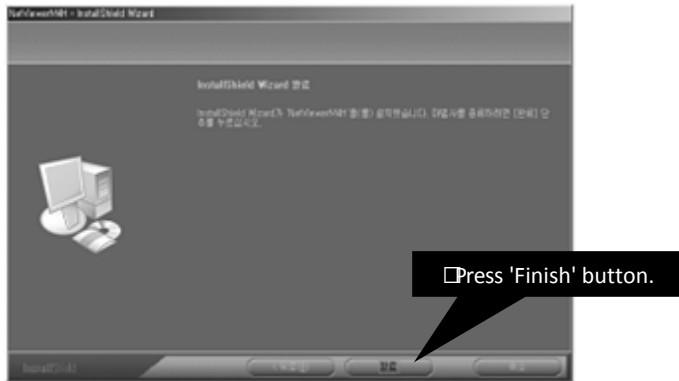
6.2 NET VIEWER SETUP

6.2.1 INSTALLATION

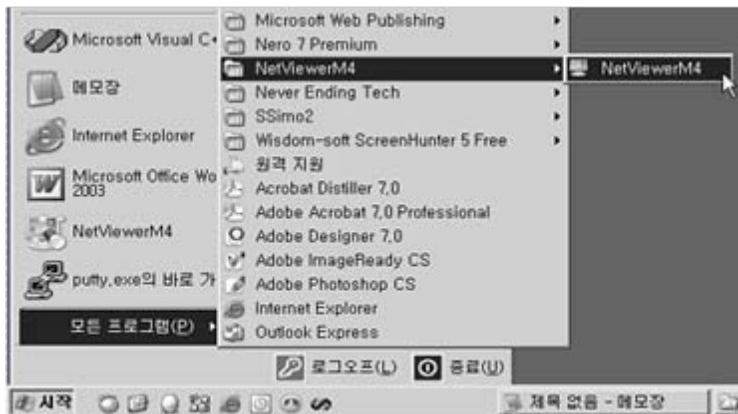
Insert program CD in the package into CD(DVD)-ROM in your PC and double click the icon (NetViewerM4H.EXE) below.







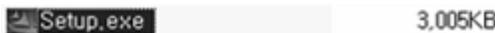
- After the installation, you can see the icon on the wallpaper as left.
- Along with the icon on the wall paper, Net Viewer program is registered in "All Programs".



6.2.2 PROGRAM REMOVAL

(1) Program removal by Setup.exe

□ Double click the icon of Setup.exe.



□ Select "Remove" and press "Next" button.



□ Select "Y" button.



□ Click "Finish" button and Net viewer is uninstalled.

(2) Program removal by Window's Program additional and removal



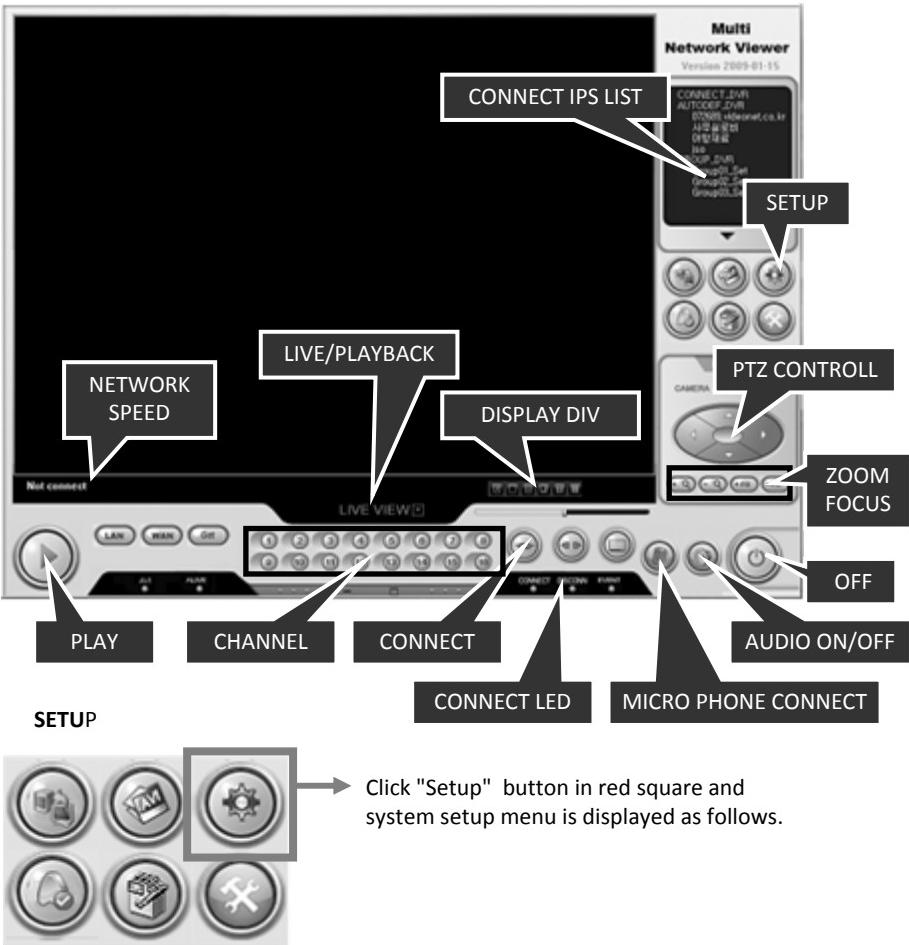
6.2.3 NETVIEWER FUNCTION

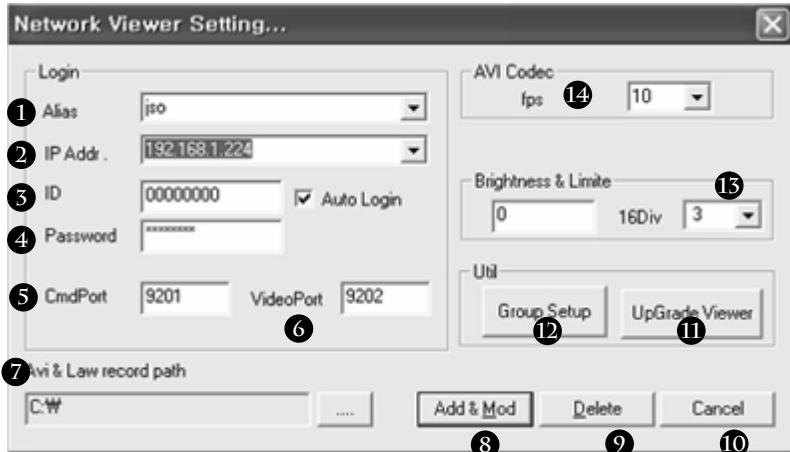
Double click the icon



and the program is displayed on screen as follows.







DVR Name : Input DVR name.

IP address : Input DVR IP address or Host Name (MAC address).

MAC address is defined as the last 6 digits of Host Name.
i.e.) 000001.videonetserver.com

ID : Input the ID registered in DVR.

c) Default ID : 00000000 / PASSWORD : 00000000

Password : Input DVR password

Command port : Open "9201" from router.

Video port : Open " 9202" from router.

Avi save directory : Select directory location that Avi file is saved in.

ADD & MOD : Add or modify setting values.

Delete : Delete IP address.

Cancel : Get out of setup menu.

Upgrade : Upgrade program version.

Group setup

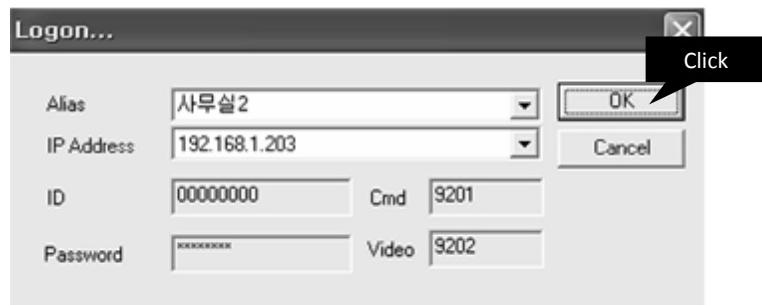
Transmission speed limit: Limit max. display speed according to graphic card specifications.

Avi save speed : Adjust frame speed for Avi file play.

2) Login : Make sure of setup values saved in setup menu and press "OK" button.



[CONNECT] [DISCONNECT]



How to set up IP router (Model : ZIO / INB5241SRe)

NOTE

Each IP router had its own setup method. Please refer to manual for details.

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\성호>ipconfig

Windows IP Configuration

Ethernet adapter 토털 영역 연결:

      Connection-specific DNS Suffix . : local
      IP Address. . . . . : 192.168.1.102
      Subnet Mask . . . . . : 255.255.255.0
      Default Gateway . . . . . : 192.168.1.1

C:\Documents and Settings\성호>
```

3. Key in Default Gateway number in the Internet address bar. (e.g.) 192.168.1.1



4. You can see the window of ZIO / INB5241SRe.

A screenshot of the INB5241SRe web interface. The title bar says "상태정보 - Microsoft Internet Explorer". The address bar shows "http://192.168.1.1". The main content area has two tabs: "WAN 상태 정보" (selected) and "LAN 상태 정보".
WAN 상태 정보:

접속 방식	DHCP
MAC 주소	08-10-17-03-C8-D0
IP 대기 시간	1200 초 (총에서 646 초 남았습니다)
INNAN IP 주소	222.98.298.52
서브넷 마스크	255.255.255.192
기본 게이트웨이	222.98.298.62
기본 DNS 주소	168.126.63.5
보조 DNS 주소	168.126.63.2

이 페이지는 5초 간격으로 경신됩니다. [다음 화면]

LAN 상태 정보:

MAC 주소	08-10-17-03-C8-D0
LAN IP 주소	192.168.1.1
서브넷 마스크	255.254.255.0
DHCP 서버	ON

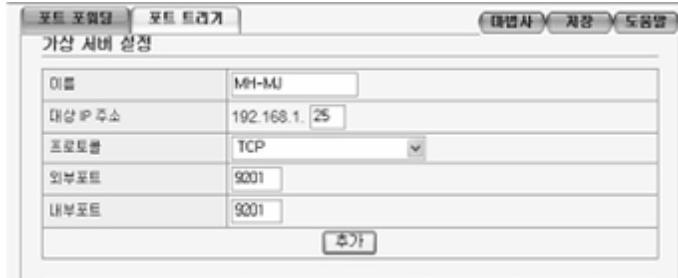
시스템 정보
제작 정보 V2.3.0 Korean Version, 2006.09.27.13:46.
All contents are Copyright 2006 - EDT Information Technology Co. LTD, Inc. All rights reserved.

5. Select "NAT" button.



6. Click "Virtual server setup and input the IP address registered in DVR in "port forwarding" menu.

- * Name : Input DVR name
- * IP address : Input the IP address registered in DVR
- * Protocol : TCP
- * External port : 9201 (Default) (It should be same as the port number set in DVR.)
- * Internal port : 9201



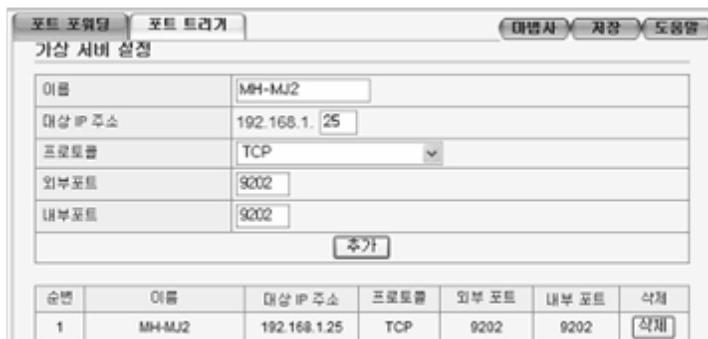
7. Click "Add" button and the list is displayed as below.

7	MH-MJ	192.168.1.25	TCP	9201	9201	삭제
---	-------	--------------	-----	------	------	-----------

8. Press "Save" button and the values are saved.



9. Conduct port forwarding of the port number 9202 by following steps as above



NOTE

**When monitoring DVR via web viewer, web port should be open.
The setup method is same as above. Default is 80.**

- 3) Direct Logon : When double clicking one of DVRs registered in tree view, the DVR is connected and displayed automatically. In case that many DVRs are registered, tree view is dropped down when clicking one DVR registered.



When double clicking one of DVR lists registered on AUTO DEF_DVR, the DVR is moved to CONNECT_DVR.

cf) AUTODEF_DVR : The DVR lists registered by SETUP menu.

CONNECT_DVR : The DVR lists connected currently out of registered DVR lists.

* AUTODEF_DVR >= CONNECT_DVR

* When connected properly, Live mode is appeared automatically.

NOTE

Max. 4 DVR IP addresses can be connected at same time. The transmission speed may be different according to user's computer specification.

■ LAN : LAN DVR search

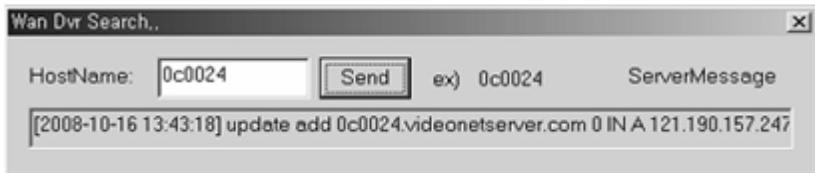


- It shows that all DVRs connected currently through LAN by pressing Search Dvr button.
- "End Search.." appears when DVR search process is finished.
- It is useful for dynamic LAN environment.

CUTION

This function may be limited on LAN or PC protected by firewall.

WAN : WAN DVR search



DVR communicates with DNS server (default : videonetserver) every 10 minutes.

- 2008-1-16 13:43:18 : Last time to communicate with DNS server

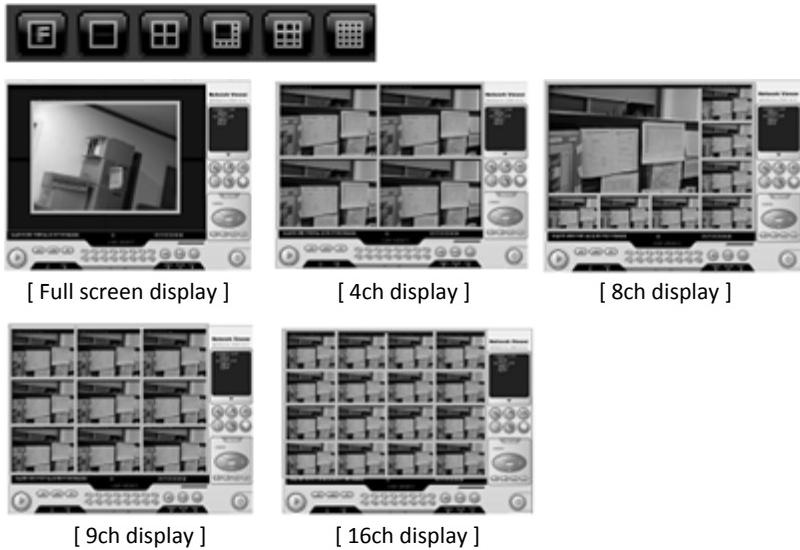
- 0c0024.videonetservr.com : host name (MAC address)

- 121.192.157.247 : WAN IP of current connected DVR

GET : it shows all users connected currently through WAN by pressing Find User button.



LIVE mode



- 130
- Single display : Click channel button or double click channel directly.
 - 4ch display : Click 4ch display icon.
 - 8ch display : Click 8ch display icon.
 - 9ch display : Click 9ch display icon.
 - 16ch display : Click 16ch display icon.

NOTE

Screen display mode is available in playback mode.

PLAYBACK mode

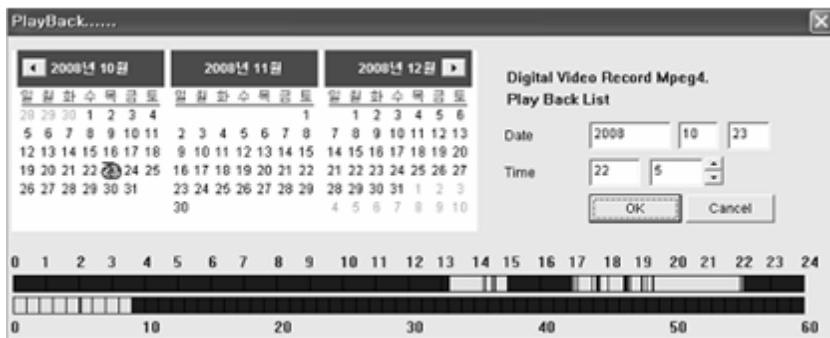


□ Press red circle and select "PLAYBACK".



□ Click "Time" button in PLAYBACK mode.

□ Click "Open" button and search menu is displayed as below.



- A. Select the month as you want.
- B. Select the date.
- C. Select the time.
The time bar is appeared in the bottom of search menu, showing recording data in yellow. (Gray part means no recording data.)
- D. Select minute and second in details as you want by clicking up/down buttons.
- E. Click "OK" button and the data is played.

PLAY speed control



PLAY

STOP/PAUSE



Fast forward



Reverse play



Play by frame
(in pause mode only)



Reverse play by frame
(in pause mode only)

BACKUP



Recording date can be archived in PC for data backup.

□ Press backup button and the lists are appears.



□ Select the list for backup as you want.

□ Select "Save directory".

□ Click "backup" button.



□ Backup is activated.

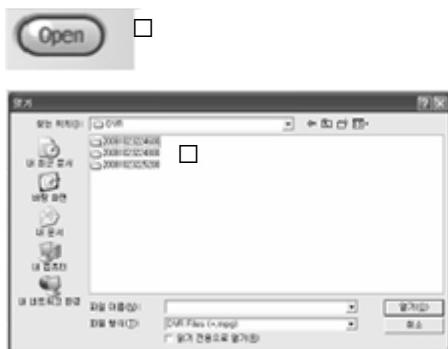


□ Backup file is archived in PC.

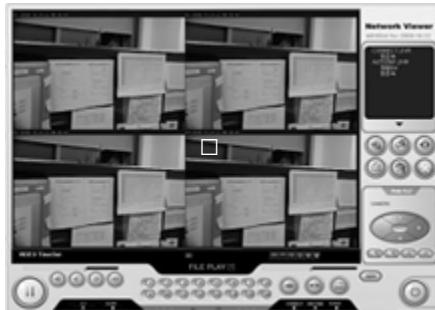
* How to play backup file



□ Select File Play mode.



□ Select BACKUP file.



NOTE

Backup file can be played on window media player without net viewer program. But, it is played each 1 channel.

Backup file is played through file viewer without net viewer program.

How to convert to AVI file



When live video or record file is converted to AVI file format, it is played on window media player without Net viewer program.

A. AVI file save directory setup

Set save directory as you want like C: \.

B. Activation

Select a channel as you want and click AVI icon as below.

To release, press it again.



C. File play

Double clicking the converted file and it is played on Window Media Player directly.

UPGRADE



User can update software version easily just by clicking one button.



Press Upgrade Net viewer button on setup menu and version upgrade starts automatically.

After the process, new version is activated on screen.

LOG LIST



It shows all of DVR log lists generated by system reboot, shutdown, menu setup, network login, network logout and so on.

Log List

Index	TIME	EVENT
2595	200807161732	NETWORK LOGIN
2594	200807161725	NETWORK LOGIN
2593	200807161724	NETWORK LOGOUT
2592	200807161718	NETWORK LOGIN
2591	200807161656	NETWORK LOGIN
2590	200807161656	SYSTEM BOOT
2589	200807161655	SHUTDOWN
2588	200807161654	MENU SETUP
2587	200807161654	SYSTEM BOOT
2586	200807161653	NETWORK LOGIN
2585	200807161652	SYSTEM BOOT
2584	200807161647	NETWORK LOGIN
2583	200807161627	NETWORK LOGOUT
2582	200807161624	NETWORK LOGIN
2581	200807161624	SYSTEM BOOT
2580	200807161615	SHUTDOWN
2579	200807161615	MENU SETUP
2578	200807161602	NETWORK LOGIN
2577	200807161601	SYSTEM BOOT
2576	200807161600	SYSTEM BOOT
2575	200807161552	NETWORK LOGIN
2574	200807161543	NETWORK LOGOUT
2573	200807161543	NETWORK LOGIN
2572	200807161542	SYSTEM BOOT
2571	200807160627	NETWORK LOGOUT
2570	200807160627	NETWORK LOGIN
2569	200807160709	NETWORK LOGIN
2568	200807160703	NETWORK LOGIN
2567	200807160703	SYSTEM BOOT

OK Cancel

□ Network user connect

□ Menu setup

□ System Reboot

Still image save



[16 div Mode still image]



Select display div mode(1,4,6,9,16Div).

click  button.

For image save on PC, press save button and for image print, press print button.

Remote Control

It can offer user to adjust menu values remotely.

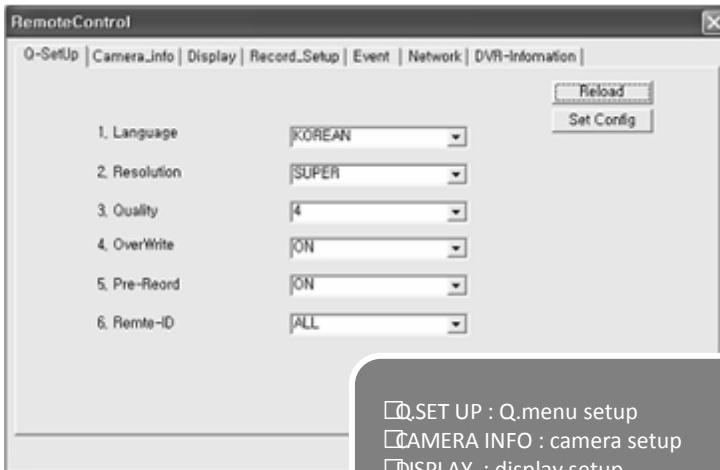


RELOAD :

It reads out menu values from DVR set.

SET CONFIG :

Adjusted values by net viewer apply to remote DVR set.



- SET UP : Q.menu setup
- CAMERA INFO : camera setup
- DISPLAY : display setup
- RECORD-SETUP : recording setup
- EVENT : event setup
- NETWORK : network setup
- DVR-INFORMATION : system information

PTZ control



User can remotely control PTZ camera on Net Viewer.

1) PAN / TILT : Control PTZ camera to up/down/left/right direction.

2) Zoom / Focus

6.3 WEB VIEWER

It offers user to have an access to DVR by network in Internet Explorer (IE) directly for his monitoring and playback.

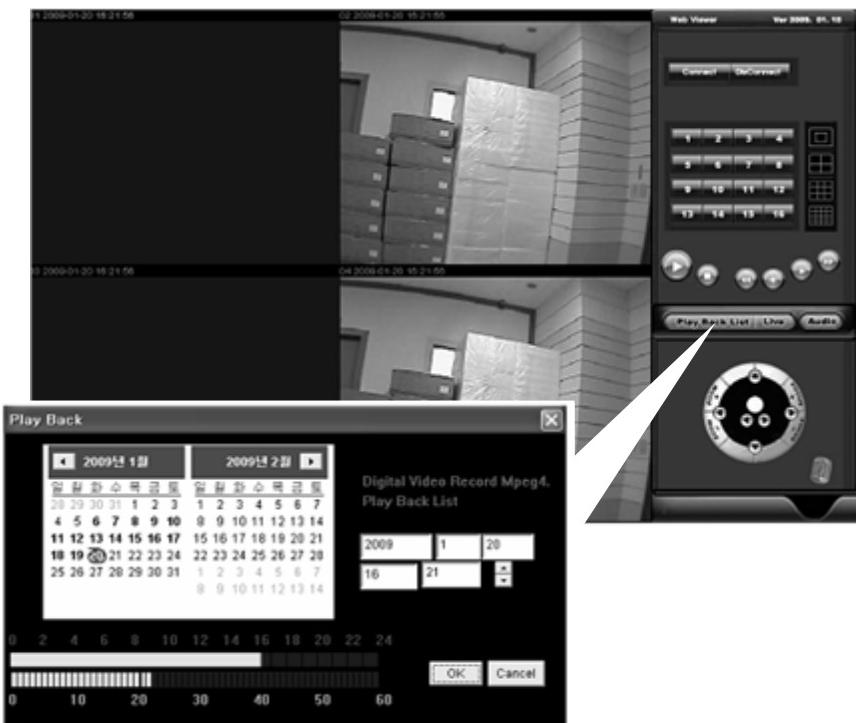
6.3.1 MAC ADDRESS ON IE (INTERNET EXPLORER)

- Type in MAC address of DVR on IE (Internet Explorer).
- You can check MAC address in INFO menu by pressing INFO button in live mode.
- Mac address consists of
"6 digits (the last 6 digits from MAC address)" . videonetserver . com"



- IP ADDRESS: Type in MAC address (ie 0c0024.videonetserver.com)
- ID : Input DVR ID (default : 00000000)
- PASSWORD : Input DVR password (default : 00000000)
- PORT : Type in 9201 as CMD port (default) and 9202 as Video port (default).
- Press "OK" and live mode appears on Net Viewer.

6.3.2 PLAY BACK

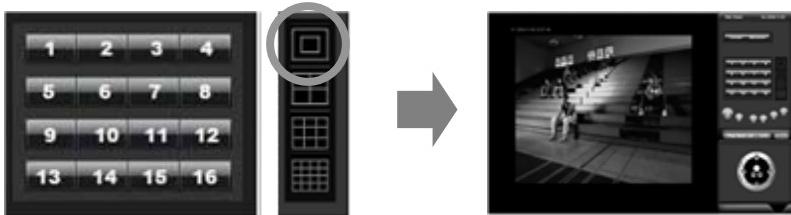


1. Press "PLAYBACK" button and playback menu appears.
2. Type in date and time as want.
3. Press "OK" button and recording data is played.

6.3.3 MULTIPLE DISPLAY

Single channel mode

Click channel number or double click the channel directly and it converts to single channel mode.



□ Various screen mode

User can move to various screen modes like 4,6,8,9,10,13,16 channel mode. Click the icon and it convert to the screen mode accordingly.



Playback speed controll



TROUBLE SHOOTING

1. The system power is turn off.

- Check if power cable is correctly connected .
- Check if input voltage is correct.
- If the system power does not turn on while power cable is correctly connected, please contact the supplier, or manufacturer.

2. The system power is turned on, but no video is displayed on the monitor.

- Check if the monitor power cable is properly connected.
- Check if the monitor is turned on.
- Check if the video output cable of the DVR is properly connected to the monitor.
- Unplug the power cable, and plug in again.

3. The camera numbers are displayed on the screen, but the camera images not displayed.

Check if the camera video output is correctly connected to the DVR system.

Check if the power cable is correctly connected on the camera.

Check if the video cable is working well , or not, which is connected to system from camera.

When video is connected with various systems, weak video signal causes this kind of problem from video distributor. In this case, the direct connection with video of relevant camera will find the solution by solving this matter.

Turn off DVR system, and turn it on again.

4. The camera video is shown on the screen, but the system doesn't record video.

Check if it is set to "NONE" in the record mode of the record setting mode.

Turn off the DVR, and turn it on again.

5. Impossible to search for the recorded video.

- Check if there is a recorded video data when you are trying to search for on the table.
- If there is no recorded video data, check if it is set to "NONE" in the record mode of the recording setting.

6. The audio data is not played in recorded video data.

- Check if audio record option is correctly set to the camera you wish to record audio.
- Check if audio mute is enabled.
- Check if microphone ,and speaker port are correctly connected on the rear of DVR system.
- Check if the connected microphone is properly working.
- Check if the connected speaker is properly operating.

7. The color of videos are strange, or video is shown abnormally.

- Check if the camera connected to the system has a problem.
- Check if the camera is not damaged by inserting abnormal camera No. and normal video camera video No. in replacement.
- Check camera No.
- Check if the video system setting is the same as your camera system. Depending on your area, the camera system can support either PAL, or NTSC. Relying on the camera video transmission system, video process differs greatly. At this state, video is seen, but hard to recognize it normally.

8. There are much (screen) noise on the image.

- Check if the video signal output has the problem from camera. Check if the camera is not damaged by inserting another camera into the working video output in replacement.

- Check if it is cut, or cross-wired, or shortened for the video cable to connect the camera ,and the DVR.
- Check if there is a high voltage wire around the video cable connecting the camera to the DVR system. It can cause the noise problem to decrease video quality.
- Check if it is correct for the video cable to connect camera to the DVR system.
When a normal power-supplying cable is used instead of the video cable, screen noise can be generated.

9. Sometimes system itself restarts.

- System itself can restart due to watchdog function when any problem occurs to the DVR.

10. The connected sensor is not working.

- Check if the type of sensor in event setup menu is the same as the connected sensor.**
- Check if system is set to use the sensor in record schedule window from the recording setting menu.**
- Check if power cable of the sensor is properly connected.**
- Check if signal cable of the sensor is properly connected.**

WARRANTY

The quality of this product is guaranteed by strict quality control processes, and testing. If the product becomes non-operational, the warranty may be in operation. The warranty period is valid for 1 year from the date of purchase.

WARRANTY GUIDE

- * Check the Product Warranty Sheet to make sure it is still in effect.
- Check the problem again, and contact the supplier, or manufacturer you purchased DVR unit from.
- About product repair, exchange, or refund, we follow the "compensation regulation for customer's loss" announced by "the Economic Planning Board". (Korea only)

WARRANTY

If the product becomes non-operational, the warranty may be in operation. The warranty period is valid for 1 year (s) from the date of purchase. Service fee, and replacement parts will be charged in below cases:

1. Damaged the user's carelessness.
2. Damaged due to a natural disaster.
3. Damaged due to the user not following the instructions, and cautions written in the user's guide.
4. Damaged due to incorrect power voltage, and/or frequency being used.
5. If the Product Warranty sheet is expired.
6. Damaged due to an engineer not employed by supplier, or manufacturer modifying the system.

If your system is damaged after the expiry of the warranty period, free repair service will not be available. If you wish the system to be repaired, service fee, and replacement parts will be charged.

PRODUCT WARRANTY

Product / Model	
Serial Number	
Purchasing Dealer	
Purchasing Date	
Warranty Period	year (s) from the purchasing date.
Customer	Name
	Address

- The Product Warranty Sheet will not be issued again.
- The Product Warranty Sheet must be filled on the same day as the product's purchase.
- This document must be shown in order to receive the free repair service.